

THE WORLDS OF THE INDIAN OCEAN

A Global History

VOLUME II

From the Seventh Century to the Fifteenth Century CE

PHILIPPE BEAUJARD



VISIT...

LANZAROTE
Caliente.COM

The Worlds of the Indian Ocean

Europe's place in history is reassessed in this first comprehensive history of the ancient world, centering on the Indian Ocean and its role in pre-modern globalization. Philippe Beaujard presents an ambitious and comprehensive global history of the Indian Ocean world, from the earliest state formations to 1500 CE. Supported by a wealth of empirical data, full-color maps, plates, and figures, he shows how Asia and Africa dominated the economic and cultural landscape and the flow of ideas in the pre-modern world. This led to a transregional division of labor and an Afro-Eurasian world economy. Beaujard questions the origins of capitalism and hints at how this world-system may evolve in the future. The result is a reorienting of world history, taking the Indian Ocean, rather than Europe, as the point of departure.

Volume II provides in-depth coverage of the period from the seventh century to the fifteenth century CE.

Professor Philippe Beaujard is an Emeritus Director of Research at the Centre National de la Recherche Scientifique, Institut des Mondes Africains, Paris.

The Worlds of the Indian Ocean

Written and translated by

Philippe Beaujard

Centre National de la Recherche Scientifique, Paris

Europe's place in history is reassessed in this first comprehensive history of the ancient world, centering on the Indian Ocean and its role in pre-modern globalization. Philippe Beaujard presents an ambitious and comprehensive global history of the Indian Ocean world, from the earliest state formations to 1500 CE. Supported by a wealth of empirical data, full-color maps, plates, and figures, he shows how Asia and Africa dominated the economic and cultural landscape and the flow of ideas in the pre-modern world. This led to a transregional division of labor and an Afro-Eurasian world economy. Beaujard questions the origins of capitalism and hints at how this world-system may evolve in the future. The result is a reorienting of world history, taking the Indian Ocean, rather than Europe, as the point of departure.

Volume I

From the Fourth Millennium BCE to the Sixth Century CE

Philippe Beaujard

Translation edited by Tamara Loring, Frances Meadows, and Andromeda Tait

Volume II

From the Seventh Century to the Fifteenth Century CE

Philippe Beaujard

Translation edited by Tamara Loring, Frances Meadows, and Andromeda Tait

THE WORLDS *of the* INDIAN OCEAN

A Global History

VOLUME II

From the Seventh Century to
the Fifteenth Century CE

A revised and updated translation

Written and translated by
Philippe Beaujard

Centre National de la Recherche Scientifique, Paris

Translation edited by
Tamara Loring, Frances Meadows,
and Andromeda Tait

 **CAMBRIDGE**
UNIVERSITY PRESS

CAMBRIDGE
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

4843/24, 2nd Floor, Ansari Road, Daryaganj, Delhi – 110002, India

79 Anson Road, #06-04/06, Singapore 079906

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9781108424653

DOI: [10.1017/9781108341219](https://doi.org/10.1017/9781108341219)

© Philippe Beaujard 2019

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2019

Translated and updated from the original French edition

Originally published in France as:

Les mondes de l'océan indien.

Volume 1: De la formation de l'Etat au premier système-monde afro-eurasien (4^e millénaire av. J.-C.–6^e siècle ap. J.-C.)

Volume 2: L'océan Indien, au cœur des globalisations de l'Ancien Monde (7^e–15^e siècles)

By Philippe BEAUJARD

© Armand Colin, Paris, 2012

ARMAND COLIN is a trademark of DUNOD Editeur – 11, rue Paul Bert – 92240 MALAKOFF

Published with the help of the Institut des Mondes Africains – UMR 8171 – CNRS /Université Paris 1 / EPHE /Université de Provence

Printed in the United Kingdom by TJ International Ltd, Padstow, Cornwall

A catalogue record for this publication is available from the British Library.

Library of Congress Cataloging-in-Publication Data

NAMES: Beaujard, Philippe, author.

TITLE: The worlds of the Indian Ocean : a global history / Philippe Beaujard (Le Centre National de la Recherche Scientifique, Paris) ; translation edited by Tamara Loring, Frances Meadows and Andromeda Tait .

OTHER TITLES: Mondes de l'océan Indien. English

DESCRIPTION: Cambridge, United Kingdom ; New York, NY : Cambridge University Press, 2019. | Revised and updated translation of: Les mondes de l'océan Indien, Armand Colin, Paris, 2012 . | Includes bibliographical references and indexes. Contents: Volume I. From the Fourth Century BCE to the Sixth Century CE – Volume II. From the Seventh Century to the Fifteenth Century CE.

IDENTIFIERS: LCCN 2018037957 | ISBN 9781108424561 (v. 1) | ISBN 9781108424653 (v. 2) | ISBN 9781108341271 (set)

SUBJECTS: LCSH: Excavations (Archaeology) – Indian Ocean Region. | Indian Ocean Region – Antiquities. | Indian Ocean Region – Civilization. | Indian Ocean Region – Economic conditions. | Globalization – History – To 1500. | History, Ancient.

CLASSIFICATION: LCC DS338 .B42I3 2019 | DDC 909/.09824–dc23

LC record available at <https://lcn.loc.gov/2018037957>

Two Volume Set ISBN 978-1-108-34127-1 Hardback

Volume 1 ISBN 978-1-108-42456-1 Hardback

Volume 11 ISBN 978-1-108-42465-3 Hardback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

This book is dedicated to my mother Odette Beaujard-Barreau, who died on May 28, 2009, to my father Lucien Beaujard, who died on December 14, 2010, and to my friend Ernest Hudspith, who died on October 22, 2010.

CONTENTS

<i>List of Maps and Charts (in Color Plates)</i>	page xii
<i>List of Illustrations (in Color Plates)</i>	xiii
<i>List of Figures</i>	xv
<i>List of Tables</i>	xvii
<i>List of Abbreviations</i>	xviii

Part I The Indian Ocean between Tang China and the Muslim Empire (Seventh–Tenth Century)	I
Introduction	3
1 Tang China and the Rise of the Silk Roads	18
The Reunification of China by the Sui Dynasty (581–617)	18
Tang China (618–907): Buddhism, Long-Distance Trade, and the Development of Markets	19
“The Golden Age” (618–755)	19
The Chinese Downturn and the Defeat of An Lushan’s Revolt (755–763)	30
The Second Tang Period: The “Indian Summer” (763–907) and the Fall	31
China and the Indian Ocean: Evidence from Arabo-Persian Texts	37
The Advent of the Northern Song	40
2 Islam: The Conquest of Lands and Oceans	42
From Muhammad to the Umayyads and the Abbasids: Formation of an Empire	42
Advances in Agriculture, Industry and Knowledge, and Expansion of Trade:	
The Abbasid “Golden Age” (750–850)	45
Decline during the Second Half of the Ninth Century and the Tenth Century	67
3 India: A Core with Four Centers	72
Northern India: The Gurjara-Pratihāra	75
The Rāshtrakūta from the Deccan Region, “Friends of the Muslims”	79
The Pāla of Bengal	83
The Pallava (Tamil Nadu and Andhra Pradesh)	84
The Prosperity of Sri Lanka	86
The Emergence of the Chola by the Late Tenth Century	87
4 Southeast Asia: The Rise of the Srīwijayan Thalassocracy and the Javanese Kingdoms	88
The Thalassocracy of Srīwijaya	88
The Thai–Malay Peninsula	91
Continental Southeast Asia	93

	Dvāravatī: A System of City-States?	94
	The Emergence of the Khmer State	95
	Champa	96
	The Javanese Kingdoms: Rice Cultivation and Long-Distance Trade	97
5	East Africa: Dawn of the Swahili Culture	106
	The “Zanjan” Phase (Sixth–Tenth Century)	106
	The Indians and East Africa	121
	The Comorian Hub	124
	Ongoing Austronesian Travels to the Western Indian Ocean	131
	Archaeological Data	131
	Chinese Chronicles between the Third and Tenth Centuries	132
	Arab and Persian Texts between the Ninth and Twelfth Centuries	132
6	Madagascar (Seventh–Eleventh Century): Early Cultural Hybridization	138
	Archaeological Coastal Sites	139
	First Signs of Human Presence in the Highlands	143
Part II	Globalization during the Song and Mongol Periods (Tenth–Fourteenth Century), and the Downturn of the Fourteenth Century	145
	Introduction	147
7	China: The Golden Age of the Song, the Mongol Conquest, and the Ming Revival	178
	The Northern Song (960–1127)	178
	The Southern Song (1127–1279): Long-Distance Trade and “Proto-Capitalism”	190
	China under the Mongol Domination of the Yuan (1279–1368): Exploitation, and Later (1320–) Recession and Uprisings	203
	Ming China and the Confucian Ideal (1368–)	212
8	India: From the Chola Empire to the Delhi Sultanate	216
	Gujarat and the Western Coast of India	217
	The Chālukya Empire of Kalyana	220
	The Chola Empire: Rice Cultivation and Long-Distance Trade	221
	Bengal	228
	Magnificence and Fall of the Delhi Sultanate	229
	The Emergence and Rise of the Sultanate	229
	The States to the South of the Delhi Sultanate	232
	The Boom in Trade from the Twelfth Century Onward	234
	The Climax of the Delhi Sultanate	241
	The Decline and Disintegration of the Sultanate	243
9	Southeast Asia: From the Decline of Srīwijaya to the Rise of Mojopahit	252
	Continental Southeast Asia: A Limited Role in Long-Distance Trade (Eleventh–Thirteenth Century)	252
	The Slow Decline of Srīwijaya and the Rising Power of Java	257
	A First Phase of Islamization	267

	The Impact of the Mongol Expansion: Mojopahit Is Created	269
	The Kingdom of Ayuthiā Emerges in Thailand (1350–)	274
	The Development of Mojopahit (Java) during the Fourteenth Century	275
10	Central and Western Asia: From the Seljuk Empire to the Ilkhanids	280
	From the Seljuk Empire to the Crusader Aggression	280
	The Shock of the Mongol Invasion	287
	The Ilkhāns of Iran: The Flourishing of the Eastern Persian Gulf	290
	The Formation of Tamerlane's Empire	297
11	Egypt and Yemen: The Jewish and <i>Kārimī</i> Networks	299
	Egypt under the Fatimids, Ayyūbids, and Mamluks: Prosperity (1000–1340) and Decline (1340–1380)	299
	The Fatimid Reign	299
	Ayyūbid Egypt	307
	Egypt during the Mamluk Period	309
	Yemen, from the Ziyadids to the Rasūlids: Production and Long-Distance Trade	317
12	East Africa: The Rise of the Swahili Culture and the Expansion of Islam	329
	From the Zanj to the Swahili (Eleventh–Thirteenth Century)	329
	The Fourteenth Century: Kilwa's Zenith and Decline, and the Flowering of Great Zimbabwe	356
	The Comoros	366
13	Madagascar: The Development of Trading Ports and the Interior	371
	Ecological Changes during the Tenth and Eleventh Centuries	373
	The Islamic Trading Ports	374
	Archaeological Data	374
	Arabo-Persians' Accounts of Madagascar	378
	Marco Polo and Madagascar	382
	Chinese Texts and Madagascar	384
	Coasts and the Interior: Relations between Regions	385
	The Highlands: The Fiekēna Period	385
	The Southeastern Coast and Anosy	387
	The South	388
	Western Madagascar	390
	Trade Networks and Syncretisms	391
	African Inflows	391
	The Genetic Data	391
	Written and Oral Sources	392
	Comparative Anthropology	395
	New Austronesian Arrivals: Zavaka, Zafiraminia, and Ancestors of the <i>Andriana</i> of Imerina (Twelfth–Fourteenth Century?)	402
	The Zafiraminia and Their Legacy	403
	Zavaka and Zafiraminia	410
	Links between the Zafiraminia and the <i>Andriana</i> Ancestors of the Merina Kings	412
	Space Structure and Political Power	416
	Mastering Time	422
	The Expansion of Wet Rice Cultivation	426
	The Introduction of New Cultivated Plants	429

Part III	From the Globalization of the Afro-Eurasian Area to the Dawn of European Expansion (Fifteenth and Early Sixteenth Centuries)	431
	Introduction	433
14	Ming China: From Expansion to Withdrawal into Threatened Territory	458
	Undertaking the Great Maritime Expeditions	458
	The 1433 Withdrawal: External Threats and Internal Difficulties	467
	Economic Prosperity and Market Advances (Late Fifteenth Century)	473
15	India: The Flowering of the Sultanates and the Expansion of Vijayanāgara	477
	The Sultanate of Gujarat	478
	The Bahmani Sultanate	481
	Vijayanāgara: A Hindu Empire Open onto Two Seas	483
	The Sultanate of Bengal: An Indian Form of “Mercantilism”?	492
16	Southeast Asia: Era of the Merchant Sultanates	496
	The Flowering of Merchant Sultanates in Insular Asia	496
	The Sultanate of Malacca	504
	Continental Southeast Asia: Expansion of Ayuthiā and Dai Viēt	509
	The Monetization of Economies during the Second Half of the Fifteenth Century	512
17	Western Asia: Revival of the Persian Gulf	515
	The Timurids, the “Black Sheep” and “White Sheep” Turkmens, and the Ottoman Empire: A Fluid Political Situation	515
	Hormuz and the Persian Gulf Trade	519
18	Egypt and Yemen: Advances in State Trade and the End of the <i>Kārimī</i>	522
	Egypt, between Two Threats	522
	Yemen: From the Rasūlid Decline to the Short-Lived Ṭāhirid Revival	531
19	East Africa and the Comoros	535
	The Decline of Kilwa and Great Zimbabwe; the Rise of Mombasa and Mogadishu	535
	The Comoros of the “Classical Period”	552
20	Madagascar (Fifteenth–Sixteenth Century): The Rise of Trading Ports and Development of the Highlands	555
	The Islamic Trading Ports	557
	Archaeological Data	557
	Madagascar in Arabo-Persian Texts	569
	The Last Austronesian Arrivals	573
	Portuguese Testimonies	573
	Arabico-Malagasy Manuscripts from the Antemoro Kingdom	576
	Coasts and the Interior: Relationships between Regions	578
	The Highlands: The Development of Fortified Villages	578
	Anosy	582
	The South	583
	The West: Africans along the Malagasy Coasts	584

Syncretic Islam of the Antemoro Kingdom (Southeast)	589
Means of Exchange in Madagascar	599
21 The Portuguese in the Indian Ocean	602
The Portuguese Arrive on the Scene	602
The Portuguese in Madagascar	610
The Reconnaissance of the Malagasy Coasts	610
Portuguese Testimonies about Life in the Trading Ports of Madagascar	614
Epilogue	617
The First World-Systems	618
Toward the Formation of an Afro-Eurasian World-System	625
The Pulsations of the World-System	630
The Fringe Cultures of the Indian Ocean: The Example of Madagascar	645
Cores, Semi-Peripheries, and Peripheries: Processes of Domination and Coevolution	650
Production, Commercial, and Cultural Exchanges, and the Building of Hierarchies	650
Coevolution and Shifting Power Centers	661
Continuity and Change: The Expansion of the World-System	665
Capital Accumulation: The State, Religious Networks, and the Private Sector	672
The Advent of the Modern Capitalist World-System and the Industrial Revolution	680
<i>Bibliography</i>	692
<i>Index of Geographical Names</i>	773
<i>Name Index</i>	794
<i>Subject Index</i>	812

Color plates can be found at the following locations:

Plate Section 1: between pages 110 and 111

Plate Section 2: between pages 302 and 303

Plate Section 3: between pages 494 and 495

Plate Section 4: between pages 590 and 591

MAPS AND CHARTS (IN COLOR PLATES)

Plate Section 1: between pages 110 and 111

- 1.2 The Afro-Eurasian world-system between the seventh and ninth centuries
- 1.3 The eastern Indian Ocean and the China Sea between the seventh and tenth centuries
- 1.4 Western Asia and northeastern Africa from the seventh to the tenth century
- 1.5 East Africa and Madagascar (seventh–tenth century)
- 11.1 The Afro-Eurasian world-system between the eleventh and early thirteenth centuries
- 11.2 Trade in the Indian Ocean during the eleventh and twelfth centuries: relative significance of the main ports
- 11.3 The Afro-Eurasian world-system during the thirteenth and fourteenth centuries
- 11.4 Eastern Asia during the eleventh and twelfth centuries
- 11.5 Eastern Asia during the thirteenth and fourteenth centuries
- 11.6 Western Asia and northeastern Africa during the eleventh and twelfth centuries
- 11.7 Western Asia and northeastern Africa during the thirteenth and fourteenth centuries
- 11.8 East Africa and Madagascar (eleventh to fourteenth century)
- 11.9 Madagascar: main early sites (ninth to twelfth century)
- 11.10 Madagascar: main sites (thirteenth to fifteenth century); routes followed by the Onjatsy, Zafiraminia, and Anteoñy-Antalaotra
- 111.1 The Afro-Eurasian world-system in the fifteenth century
- 111.2 Trade in the Indian Ocean in the fifteenth century: relative importance of the main ports

Plate Section 4: between pages 590 and 591

- 111.3 Eastern Asia in the fifteenth century
- 111.4 Western Asia and northeastern Africa in the fifteenth century
- 111.5 East Africa and Madagascar (fifteenth to early sixteenth century)
- 111.6 Madagascar (twelfth to fifteenth century): trade routes and location of raw materials

The information used for the maps was extracted from the ESRI spatial database, world base DWC 1993 and ESRI Data and Maps 2002.

ILLUSTRATIONS (IN COLOR PLATES)

Plate Section 2: between pages 302 and 303

- I–IV The Tang Empire and the Silk Roads (1–4)
- v–VIII The Muslim Empire and the trading routes (1–4)
- IX The magical world of faraway islands
- x India: state, religion, and trade
- XI Buddhism in South Asia and Southeast Asia
- XII Insular Southeast Asia, an interface between China and India
- XIII Departure of the Chinese princess Cai Wenji to the Xiongnu country
- XIV China: the working of silk
- xv–xvi Cultural exchanges between China and western Asia (tenth to fourteenth century) (1–2)
- xvii Cultural exchanges between China and the Indian Ocean (tenth to fourteenth century)
- xviii Cultural exchanges between China and Europe (tenth to fourteenth century)
- xix Science and techniques in the Muslim world (tenth to fourteenth century)
- xx–xxi Islam and the mapping of the world (tenth to fourteenth century) (1–2)
- xxii Arts of the Muslim world (tenth to fourteenth century)
- xxiii Trade in the Indian Ocean (tenth to fourteenth century)
- xxiv India under the Delhi sultanate
- xxv–xxvi Insular Southeast Asia, between China and the Indian Ocean (1–2)
- xxvii African gold
- xxviii Glass beads in East Africa (tenth to fourteenth century)
- xxix East Africa: Kilwa
- xxx Mahilaka (northwestern Madagascar): ceramics and beads (tenth to fourteenth century)
- xxxi East coast of Madagascar: the working of chlorite schist (tenth to fifteenth century)
- xxxii The Highlands and southern Madagascar: ceramics belonging to the tenth- to fourteenth-century period

Plate Section 3: between pages 494 and 495

- xxxiii Blue-and-white porcelain: cultural exchanges (fifteenth century)
- xxxiv China and trade in the Indian Ocean (fifteenth century)
- xxxv The crossroads of Southeast Asia (fifteenth century)
- xxxvi India: architecture as symbol of power (fifteenth century)
- xxxvii Timurid art
- xxxviii The Silk Roads (fifteenth century)
- xxxix Two Indian Ocean ports: Calicut and Aden

- XL–XLI The Ottoman Empire (1–2)
- XLII The Portuguese irruption into Africa
- XLIII A Genoese map of the world (1457)
- XLIV *Mappa mundi* by the Venetian Fra Mauro (1459)
- XLV The “Cantino” map (1502)
- XLVI East Africa (fourteenth and fifteenth centuries)
- XLVII East Africa
- XLVIII Cemeteries of northwestern Madagascar: tombstone and tombs (fifteenth century)
- XLIX Cemetery of Vohemary (northeastern Madagascar): Chinese and Indian influences (fifteenth century)
 - L Cemetery of Vohemary: Chinese blue-and-white porcelain (fifteenth century)
 - LI Cemetery of Vohemary: weight, glass, and mirror (fifteenth century)
 - LII Cemetery of Vohemary: box made of bone, and mother-of-pearl spoon
- LIII The Malagasy Highlands
- LIV The Antemoro kingdom (southeastern Madagascar): a syncretic form of Islam
- LV The Portuguese in the Indian Ocean: Malacca and Madagascar
- LVI World map by Martin Waldseemüller (1507)

FIGURES

3.1	Gold Stater, Kidarite coin, 360–380	page 78
3.2	Coin of the Gurjara-Pratihāra king Mihira Bhoja I (c. 836–885)	78
3.3	Coin from Gujarat (c. tenth century)	78
3.4	Rahstrakuta coin?	81
4.1	Vessel with outrigger, temple of Borobudur, eighth century	99
7.1	Astronomical clock-tower built by Su Song at Kaifeng in 1090	183
7.2	“Winding the thread on the spindle”	193
7.3	Spinning wheel using several spindles operated by a treadle mechanism	194
8.1	Ship featured on a memorial stone, Konkan coast, India, fourteenth or fifteenth century	220
8.2	Chola gold coin of Rājārāja I	224
8.3	Bull-and-rider coin, Shāhī dynasty, between 750 and 900, Kabul	230
8.4	Bull-and-rider coin, Chāhamāna dynasty, late twelfth century, Delhi	230
8.5	Gold coin issued by the Yādava king Ramachandra (1270–1311)	238
10.1	Al-Jazari’s third water-raising device	287
12.1	Graffito of a <i>mtepe</i> ship, Great Mosque, Kilwa	343
12.2	<i>Mtepe</i> ship on Zanzibar, photo around 1890, E. D. Ropes	343
12.3	Copper coins from Kilwa, found in 1944 in northern Australia	361
12.4	Drawing of the palace of Husuni Kubwa, Kilwa	362
12.5	Drawing of the <i>mihrab</i> of the Domoni mosque (Comoros)	369
13.1	“Male stone” <i>vatolahy</i> topped by a “hat,” Betsileo country, Highlands of Madagascar	418
13.2	Madagascar: symbolic systems inherited from indianized Indonesia	419
13.3	Compass rose: Malay system and Malagasy system	420
14.1	Drawing of a junk, from a book published in 1757	464
14.2	Folio from the “Mao Kun map,” showing East Africa	465
14.3	Stellar diagram, from the <i>Wubei zhi</i> written by Mao Yuanyi (1621)	466
16.1	Drawing of a ship of the <i>jong</i> type, reconstituted from documents dated to the sixteenth and early seventeenth centuries	499
16.2	Drawing of a <i>patorani</i> , C. W. Hawkins 1982	499
18.1	Price trends for pepper, ginger, and cloves during the fifteenth century at Alexandria	527
Ep.1	The Asian, African, and European world-systems from 3500 BCE to 1750 CE*	621
Ep.2	Economic flows in the Afro-Eurasian world-system (first to eighteenth century): correlations with climatic data, demographic growth, technological progress, and the emergence and fall of the main empires*	632

Ep.3	Cyclical logic of world-systems prior to the sixteenth century*	642
Ep.4	Variations in average temperature over two millennia	647
	<i>Map (in Text)</i>	
1.1	Trade in the Indian Ocean (seventh–tenth century): the relative importance of the main ports	2

* *Repeated in Color Plate Section 4.*

TABLES

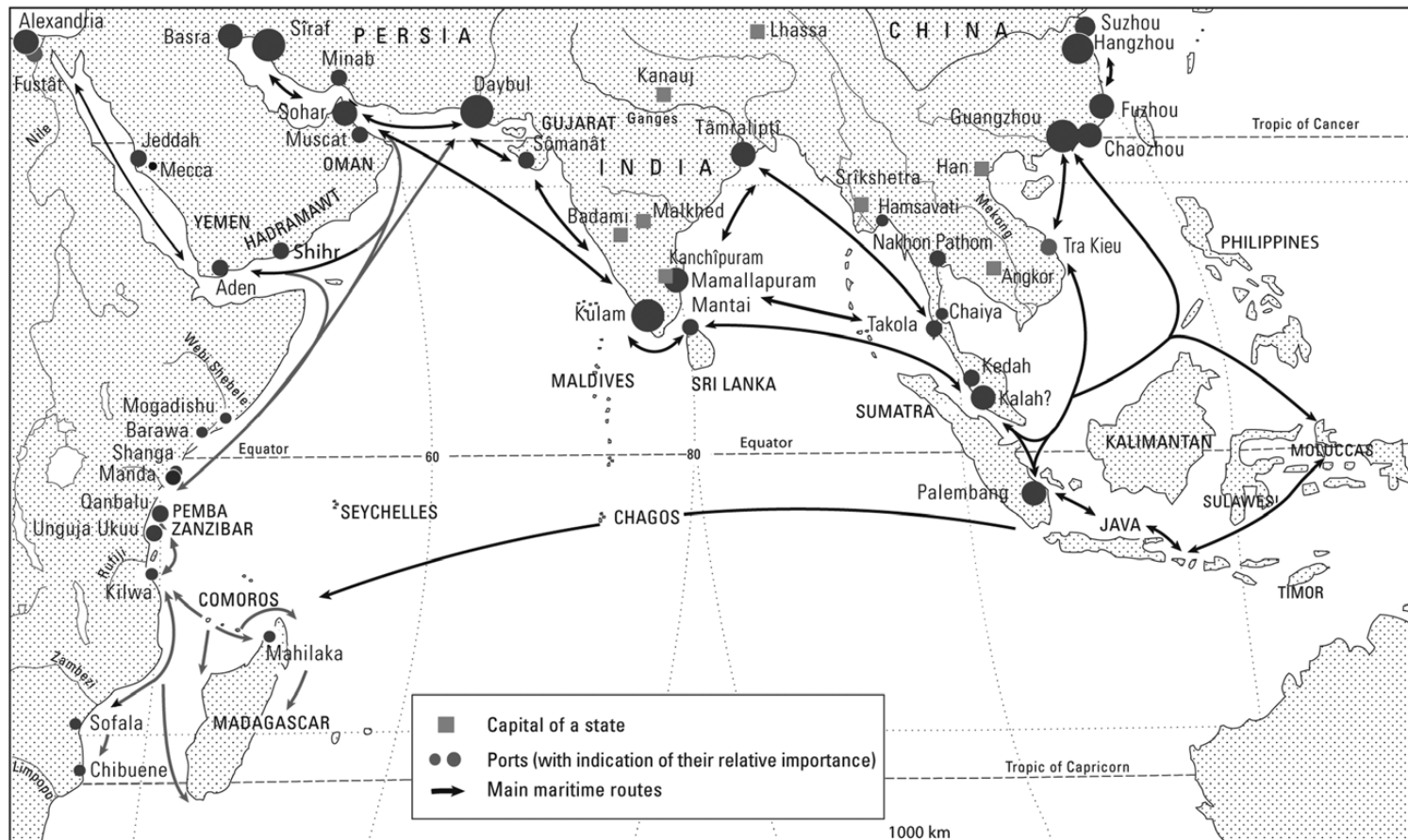
1.In.1	Comparative chronologies (seventh–tenth century): China, Central Asia; India; Southeast Asia	<i>page 16</i>
1. In.2	Comparative chronologies (seventh–tenth century): western Asia, the Persian Gulf, Arabia; Red Sea, Arabia; East Africa, Madagascar; Europe, the Mediterranean	<i>17</i>
11.In.1	Comparative chronologies (tenth–fourteenth century): China and Japan; India; Southeast Asia	<i>176</i>
11.In.2	Comparative chronologies (tenth–fourteenth century): Central Asia, western Asia, Persian Gulf; Egypt, Red Sea; East Africa, Madagascar; Europe	<i>177</i>
111.In.1	Comparative chronologies (fifteenth and early sixteenth centuries): China; East and Southeast Asia; India	<i>456</i>
111.In.2	Comparative chronologies (fifteenth and early sixteenth centuries): Central Asia, western Asia, Persian Gulf; Egypt, Red Sea; East Africa, Madagascar; Europe	<i>456</i>
8.1	Horse prices in the mid-fourteenth century	<i>249</i>
18.1	Price trends for pepper and ginger during the fifteenth century at Alexandria	<i>526</i>
Ep.1	Solar minima and average temperature minima	<i>646</i>

ABBREVIATIONS

BCE	before the Common, Current, or Christian era
BP	before present
<i>c.</i>	<i>circa</i>
c.	century
CE	Common, Current, or Christian era
E.	East
MC	Middle Chronology
N.	North
PAN	Proto-Austronesian
p.c.	personal communication
PMP	Proto-Malayo-Polynesian
S.	South
Skt.	Sanskrit
Sw.	Swahili (language)
W.	West

PART I

The Indian Ocean between Tang China
and the Muslim Empire (Seventh–Tenth
Century)



Map 1.1 Trade in the Indian Ocean (seventh–tenth century): the relative importance of the main ports

Introduction

Being a merchant, I sought out men of my own profession, and particularly those who came from foreign countries, as I hoped in this way to hear news from Baghdad, and find out some means of returning thither. For the capital of King Mihrage is situated on the seacoast, and has a fine harbor, where ships arrive daily from the different quarters of the world.¹

The fifth and early sixth centuries saw a sharp economic decline in the Afro-Eurasian world-system.² The Silk Roads towards Afghanistan and northwestern India were shut as of the end of the fifth century. This situation favored the development of maritime routes between China and the Persian Gulf, although trade activity remained limited in the Indian Ocean at the beginning of the following century. The sixth century, however, saw a revival in trade within the Eurasian sphere. It was marked by the founding of a Turkish Empire³ in 552 in Central Asia – in this empire, the western khānate controlled Sogdiana⁴ – and the reunification of China by the Sui dynasty in 589. During the third century, the collapse of the Han and the downturn of the Roman Empire had triggered a global recession of the world-system; the reappearance of a Chinese empire under the Sui, succeeded by the Tang in the early eighth century, relaunched a phase of overall growth.⁵ This upturn coincided with a period of climatic changes that probably played a major role: milder conditions prevailed and rainfall increased in northern China and part of Central Asia. Various regions in Europe also enjoyed a milder (and often drier) climate from 700 onward, which would extend –

¹ “History of Sindbad the Sailor,” *The Thousand and One Nights*, www.gutenberg.org/files/10121/10121.txt [The Project Gutenberg EBook of Oriental Literature]. In fact, as R. Khawam has demonstrated (1986: 29), the adventures of Sindbad the Sailor are not part of the *Thousand and One Nights*. Sindbad’s tale may have been written four centuries prior to the *Nights*.

² It is strange that J. M. Hobson (2004: 32) begins his era of Afro-Eurasian globalization “after 500.”

³ Note that the term “Turk” is already present during the first century CE under the forms *Turcae* and *Tyrcae* in texts by Pomponius Mela and Pliny the Elder, respectively.

⁴ From their capital, Samarkand, the Sogdians played a key role in commercial exchanges in Central Asia, where their language – East Iranian – was widespread. The Turkish Empire was divided into eastern and western regions, whose respective capitals were Ötüken (Mongolia) and Suyab (Kyrgyzstan), a town located along a branch of the Silk Roads. Early on, the western Turks converted to Buddhism and took control of the steppes north of the Caucasus. The empire would be more strictly divided in 584, following an armed conflict conducted by the western khānate.

⁵ I. Morris gives an estimate of 27,000–28,000 kcal/cap/day for energy capture during the eighth and ninth centuries in the Tang Empire, a figure that may be too low if we compare it to that of the Han period (26000–27000 for the first and second centuries) (2013: 111). Morris gives an estimate of 31,000 kcal/cap/day for the Roman Empire during the first and second centuries (2013: 61).

along with oscillations and phases of relative cooling – into the mid-thirteenth century.⁶ Egypt benefited from high Nile flooding during the eighth century, a trend that persisted for the first half of the eighth century.⁷ These high floods signal abundant monsoon rains in the Indian Ocean.

During the eighth century, two sets of factors contributed to a spectacular rise in production and exchanges: first, the internal expansion of China and its interest in long-distance trade via the Silk Roads and the southern seas, along with the cosmopolitanism of the Tang period and an attraction to Buddhism; second, the formation of a Muslim empire that would extend from Central Asia to Spain, controlling the southern Mediterranean. The interconnection of these two empires by land and sea was crucial to this second phase of the world-system: it triggered a growing integration of regions that were already in contact with one another and a geographical extension of the system.

“Before the fifth century, it is possible that the Roman imperial economy surpassed the Chinese economy in various fields: road infrastructures, navigational ability, access to raw materials such as wood, and commercial techniques” (Norel 2010). Conversely, from the eighth century onward, the balance was clearly in China’s favor. Under the Sui and Tang dynasties, “the Chinese economy became the largest in the world for the first time in both gross and per capita terms,” and “China began to exercise a gravitational pull on the rest of the world economy” (Adshead 2004: 68). The Tang preeminence in the world-system was not only based on economics, it was also intellectual and political (China “was the best ordered state in the world”).⁸ The country’s development built on its institutional advances: the Tang built a rigorous administration – composed of officials recruited via exams – that encouraged the empire’s growth, at least during the first phase. In addition, an efficient army of professional soldiers was set up. For the first time, gunpowder was used in incendiary weapons. Considerable effort was devoted to improving transportation via land and water, and to initiating a postal service. Along with the redistribution of land, progress in agriculture was systematically encouraged, through the diffusion of knowledge, the building of dams, the digging of canals, the growing use of chain pumps or norias (an innovation introduced from western Asia), and the adoption of transplantation techniques in rice cultivation. Advances in agriculture bolstered an urban expansion in the Yellow River basin and the Yangtze region, which was also partly due in this region to the arrival of migrants from the north; this trend would continue and strengthen under the Song. Outstanding production developments occurred in the metallurgical, ceramic, textile, and paper industries, leading to noteworthy social changes: one example was the transformation of matrimonial regimes accompanying the thriving rural textile

⁶ Limited decreases in average temperatures in the Northern Hemisphere can be seen around 640, 740, and 800–810 (Mann and Jones 2003). One notes wetter conditions in sub-Saharan Africa between 300 and 1100 (MacEachern 2005: 443). Between 850/900 and 1150/1200, the eastern Mediterranean saw a cooler climate and decreased precipitation (linked to a positive phase of the North Atlantic Oscillation) (Sorrel *et al.* 2007). Büntgen *et al.* (2011) write of “reduced climate variability from ~700 to 1000 c.e.” in Central Europe.

⁷ W. H. Quinn (1992) lists 15 episodes of low Nile flooding during the seventh century, and 10 during the first half of the eighth century. Their number would later increase.

⁸ S. A. M. Adshead 2004: 30. According to Adshead, on a political level, the Chinese rise to power was primarily founded on “good governing.”

industry. Significant amounts of bronze coins were issued, allowing for a new monetization of the economy, which went along with combined growth of markets for both goods and factors (an embryonic system of markets set in, which would sharpen during the Song period). This economic rise was linked to flourishing long-distance trade which in turn favored technical innovations. Porcelain, “the first item of global culture” (Adshead 2004: 80), which had already appeared under the Han dynasty, was thus developed and exported at this time. Hydraulic power was used in various types of machines. The invention of xylography spurred a new diffusion of knowledge. The extension of the internal market is reflected in the emergence of a new class of merchants, supervised by the state. The state controlled prices on the grain market and imposed its monopoly on various goods.

The Tang period was a time of religious tolerance, cosmopolitanism, and an openness to the outside world which was not restricted to conducting peaceful commercial exchange and following the paths of Buddhist monks to India. In the Asian interior, the Tang emperors chose to control the supply of certain products and the merchant routes through force. Relying on the quality of their weaponry and the efficiency of their military organization, the Chinese conducted an armed expansion, which was stopped in 751, when a Muslim army defeated the Chinese in the valley of the Talas River, in Kyrgyzstan. The taste of Tang China for the exotic triggered an increase in trade with distant countries via the maritime and terrestrial Silk Roads. In Central Asia, the Chinese traded silk, lacquerware and tea for horses. State-controlled trade with the southern seas was conducted via some ports, primarily Guangzhou, where Austronesians, Indians, Arabs, and Persians docked (the Persians had been traveling to China since the Sassanid period). The Chinese, for their part, did not travel much along the trade routes. With the exceptions of the Chinese drive toward Central Asia and voyages made by monks to India, it was rather agents from other cores and of semi-peripheries – such as Southeast Asia and the states of Central Asia – who traveled to China, as well as constantly moving merchant groups, Sogdians, Syrians, Persians, and Radhanite Jews. Of these groups, Adshead aptly comments: “their real homes were not their cities but their markets” (1995: 83). In this way, groups acting as intermediaries ensured the formation of “chains of dominance,” thus conducting transfers of wealth along networks.

Trade was accompanied by significant circulation of ideas and knowledge. The Tang governance influenced the Silla kingdom in Korea and Japan during the Nara period: these regions became semi-peripheries of the Chinese “core.” The Silk Roads set in motion a westward transfer of Chinese techniques in metallurgy, the paper industry, and xylography. The windmill was introduced from Iran into China, where Syrian or Persian artisans also helped improve the glass industry. Asia’s major religions entered China along with merchants. Buddhism, arriving at the start of the first millennium, progressed in both the ruling class and the population. Beyond China, it spread into Korea and Japan. Zoroastrians, Manicheans, Jews, and Nestorian Christians were also present. The Chinese Empire welcomed Islamic influences via Central Asia and the coasts of southern China, where Yangzhou, Quanzhou, and Canton were home to sizeable foreign colonies.

The second major pole of the world-system was built on military expansion and adherence to a new religion, Islam. This new monotheism appeared in Arabia, thus in a semi-periphery of the system. It became prominent in the Arabian peninsula under the first caliph, Abū Bakr, successor to the Prophet Muhammad in 634. Islam then saw exponential growth under the caliphs ‘Umar and ‘Uthmān: Muslim armies entered the Byzantine Empire (capturing Syria and Palestine, then Egypt and Libya), and took control of Persian territories as far as Central Asia (634–652), taking advantage of the decline of both the Sassanid and Byzantine empires (Garcin 2000). Impoverished populations often welcomed the Muslim armies. Even so, the Muslims failed to take Byzantium (673–677). Moreover, a civil war erupted after ‘Uthmān’s death; it led to the assassination of the caliph ‘Alī, the Prophet’s son-in-law, and the founding of the Umayyad dynasty, which shifted the capital of the Muslim state from Medina to Damascus (661). The death of ‘Alī’s son, Ḥusayn, at the battle of Kerbala, in 680, marked a split between the Shiites, who formed the party of ‘Alī, and the Sunnis. Under the Umayyads, the Muslim Empire expanded into northern Africa and Spain, where the Visigoth kingdom showed little resistance. A defeat at Covadonga (Asturias) (718), however, halted the Muslim advance into northern Spain, and an Arab army which had entered Frankish territory was defeated at Poitiers in 732. The Arabs were also defeated, for the second time, at Byzantium in 718. In Central Asia, the Umayyads controlled territory extending as far as the Aral Sea and Ferghana. They reached the Indus valley, and Daybul – where a Sassanid garrison was stationed – was seized in 711; however, the Gurjara-Pratihāra, who dominated northern India, blocked the Arabs’ push toward Gangetic India.

The much-criticized management of the empire by the Umayyads and conflict between Shiites and Sunnis led to a revolt which gave power to Abū al-‘Abbās (749), founder of the Abbasid dynasty. The capital shifted to a new city, Baghdad, a choice revealing the new significance of the Persian Gulf, Persia, and Asian trade. The eighth century has often been described as the golden age of Islam. It was a period of economic prosperity and intellectual enlightenment, marked by the translation of the main philosophical and scientific books from the Greek world into Arabic. The period also saw scientific advances. While this cultural movement has often been linked to the action of a few caliphs, it was primarily aligned with a process of statebuilding where competing elites attempted to broaden their knowledge (Saliba 2007). Inflows also came from China (in mathematics and various industries) and India (with the introduction of Indian figures and the translation of books). The spread of Islam (as well as that of other universal religions) promoted a flowering of writing throughout the Ancient World.

The empire promoted progress in agriculture, through irrigation, crop rotation (with the cultivation of legumes), and the introduction of plants from the Indian Ocean. While these advances were not the “revolution” advocated by A. Watson (1983) (versus Planhol 1968), they did underpin demographic growth and an urbanization process as well as an expansion of crafts and industrial production, especially in textiles, glass, and ceramics. The expanding empire promoted technical borrowings and innovations; within this context, not only did the economy grow overall, but per

capita growth occurred (Hobson 2004: 42–43).⁹ A member of the Umayyad family managed to flee to Spain, where he founded an emirate at Cordoba in 756. This emirate later controlled most of the Iberian peninsula, and Cordoba became the largest city in western Europe. The spread of Islam followed not only the paths of the armies, but also commercial, maritime, and terrestrial routes. Rulers encouraged internal and external trade, facilitated by using a common currency and by developing instruments of credit. In this area, the Muslims benefited from the commercial and fiscal structure they had inherited from the Mediterranean economy and the Sassanid Empire. Still, the Muslim Empire did not form a large, unified market; rather, it showed weaker or stronger interconnections among various regional markets. In the Indian Ocean, Muslim merchants and scholars arrived in China and on the East African coast very early on. They also entered the interior of the African continent by following the trans-Saharan or Somali caravan routes.¹⁰ A private sector developed, sometimes connected with the state power, with no institutionalization of power on the part of the merchant class.

In western Europe, the Carolingian Empire was formed, as a counterpoint not only to the Muslim Empire – but also to the Byzantine kingdom.¹¹ Its founder, Pepin the Short, concluded an alliance with the Roman Papacy (in 751), and helped create a pontifical state. Crowned emperor by the pope, Charlemagne (768–814) extended the margins of his domain and the influence of Christianity.¹² With only a rudimentary administrative system, the Carolingian state developed ties of vassalage, thus promoting feudalism,¹³ aided by Europe’s recourse to heavy cavalry.¹⁴ Europe’s unity was based ideologically on the idea of Islam as a global threat to Christendom; this would later lead to the Crusades (Hobson 2004: 111). Many monasteries were built, often hosting schools and workshops of copyists. The Frankish expansion brought about a modest revival of trade and towns in western Europe. Various innovations – some introduced from Asia by the invasions of the fifth and sixth centuries – helped move the agricultural sector forward. The most notable examples were the replacement of the ard by the plow;¹⁵ three Chinese inventions – the use of the harrow (around the ninth century); the adoption of the trace harness, also called breast harness (sixth century); and the collar harness, which placed the weight of the load onto the horse’s shoulders (possibly

⁹ This period provides good examples of these “efflorescences” – prolonged episodes of increases in per capita product, founded on Smithian and Schumpeterian growth (Pomeranz 2009a) – of which Goldstone (2002) has pointed out the recurrence throughout history (on this concept of efflorescence, cf. Pomeranz 2009a).

¹⁰ Islam reached southern Ethiopia and the interior of the Horn of Africa via trade networks operating from Dahlak and the port of Zayla’ (Kapteijns 2000: 228). On the trans-Saharan routes, see below. Mas’ūdi speaks of Ethiopia as a country ruled by a *najashī* (Negus) who lived at Ku’bar (Axum?).

¹¹ The rivalry was both political and religious. Disputes were accentuated by the development of the iconoclast movement at Byzantium (726–787, 813–843).

¹² C. I. Beckwith (2011: 140ff.) points out the importance of political changes in Eurasia around the mid-eighth century. These changes did not all occur at the same level, however.

¹³ Feudalism was a system in which a suzerain granted a fief to a vassal, who owed allegiance and committed himself to providing various services, especially military help.

¹⁴ Moreover, the medieval European culture was the result of a blend of migrants of Germanic origin and Greco-Roman populations.

¹⁵ The Slavs began to use heavy plows soon after the Avar invasion of 567 (Hobson 2004: 102).

ninth century);¹⁶ other innovations included the practice of horse shoeing and the adoption of a three-year crop-rotation system instead of the previous biennial rotation. While these advances were still slow during this period, they they led to spectacular growth from 1000 onward.¹⁷ They were supported by demographic growth which they helped intensify. Various innovations were introduced via the Muslim world from the eighth century onward; one example is the use of the crank, attested in Europe in 830.

Pirenne's explanation for western Europe's decline is well known – and has been rightly criticized recently (see Findlay and O'Rourke 2007: 72ff.). For Pirenne, this decline was due to Muslim domination in the Mediterranean, which cut western Europe off from the Orient. The disappearance of papyrus, luxury textiles, spices from the Orient, and gold coins would come to symbolize this process. "The classic tradition was shattered," writes Pirenne (1939: 136), "because Islam had destroyed the ancient unity of the Mediterranean." However, had this unity not been destroyed earlier? In fact, Muhammad was truly the "maker" of the Carolingian Empire, as Pirenne (1939: 234) suggests ("without Muhammad, Charlemagne would have been inconceivable"), because the Muslim Empire favored – rather than inhibited – growth in production and trade (Findlay and O'Rourke 2007: 74). The Carolingian power encouraged (and controlled) long-distance trade, led by Lombard, Frisian, or Jewish merchants, with the Rhone and the Rhine as major axes for trade within the empire.¹⁸ Already between the fourth and eighth centuries, Jewish and Syrian merchants were trading grains with Europe, essentially from Byzantium. "When Islam spread during the eighth century, . . . the Jewish diaspora settled lastingly along the new route of the Po River, the valleys of the Alps and the Rhine valley, while maintaining ancient connections with Africa through Spain, and with the Orient through Italy" (Norel 2009b).¹⁹ As early as the eighth century, merchants from Venice, Amalfi, and Naples were trading with the Muslims, selling mostly slaves (in theory, these cities were Byzantine ports, but Amalfi and Naples in particular sought autonomy from the large powers controlling the sea). The Arabs' capture of Crete (827) and Sicily (831–878), marking a setback for Byzantium, helped emancipate the Italian cities. The Scandinavians also developed trade, starting at the beginning of the ninth century, perhaps in an attempt to bypass the Mediterranean area. Following rivers in Russia, they entered into contact with the Byzantine Empire and the Muslim world, through populations of Turkish origin: the Khazars and the Bulgars of the Volga valley. Swords, furs,²⁰ and slaves were exported southward and westward (Verdun became the "capital of a slave trade" [Simonnot 2002: 101ff.]). Tombs in Sweden, Denmark,

¹⁶ See Temple 2002: 20–23.

¹⁷ Mazoyer and Roudart 1998: 259ff. The new agrarian system, using heavy plows and plowing oxen, was above all implemented in cool temperate regions. To improve agriculture, the Mediterranean region followed "methods adapted [to its climate] such as tree crops, the terracing of hill slopes and irrigation" (Mazoyer and Roudart 1998: 260). Agricultural advances in Europe, however, should be qualified if we compare them with those of Muslim Spain, India, or China (Goody 2007: 85).

¹⁸ The exchange networks stretched as far as the British Isles, as shown by the discovery of cowries in Anglo-Saxon tombs in Kent (Sarre), Cambridgeshire (Shudy Camps, Haslingfield), and Yorkshire (Staxton) dated to the seventh century (Hugget 1988: 72).

¹⁹ "The Jews," writes Pirenne, "were the [only] economic link between Islam and Christianity" (1939: 128).

²⁰ See also Lombard 1972 and Grataloup 2010: 95.

and Germany have yielded glass beads of Asian origin (their exact source, however, remains unknown; these beads show high levels of aluminum, and a Zr/Hf ratio unusual for Indian beads) (Gratuze *et al.* 2013).

The Persian geographer Ibn Khurdādbēh (ninth century) wrote about the activities of the Rus:

The ar-Rus, a tribe from among the as-Saqaliba [Slavs] . . . They bring furs of beavers and of black foxes and swords from the most distant parts of the Saqaliba to the sea of Rum [the Mediterranean], where the ruler of ar-Rum levies tithes on them. They travel on the Itil, the river of the as-Saqaliba, and pass through Khamlij, town of the Khazars [near Astrakhan], where the ruler levies tithes on them. Then they arrive at the sea of Gurjan [Caspian Sea], and they land on the shore of it which they choose. On occasion they bring their merchandise on camels from Gurjan to Baghdad, where as-Saqaliba eunuchs serve them as interpreters. They claim to be Christians and pay [only] head tax. (2004: 22)

The founding of a Khazar Empire during the eighth century shows the significance of a route leading to the north of the Caspian Sea. This route was favored by the Byzantines, who were anxious to bypass the Persian obstacle. From the capital, Itil, at the mouth of the Volga River, roads led to the Black Sea and the Baltic Sea on the one side, and to Samarkand on the other. The aristocracy of the Khazar Empire converted to Judaism around 740,²¹ probably under the influence of Radhanite Jews who – according to Ibn Khurdādbēh – “controlled the Silk Roads” (see Lombard 1971: 248) (their name derives from the region of Radhan, east of the Tigris River, near Baghdad). Jews expelled from Byzantium arrived in great numbers in Khazaria during the seventh and eighth centuries. When Muslim armies burst into Khwarezm, Jews also left this region and settled in Khazaria.

Byzantium’s political situation was critical at this time. In addition to the Muslim threat, Byzantium had to face the Bulgars, who controlled most of the Balkans in 679 (the Bulgars were first mentioned “in 480, when the Byzantine emperor Zeno obtained their help to fight the Visigoths” [Roux 2003]). The Byzantines were also experiencing setbacks in Italy, against the Lombards, who took the exarchate of Ravenna in 751. Affected by military and economic decline, the Byzantines responded to Muslim attacks on Christian veneration of images: in 726, Leo III the Isaurian issued his first edict against this cult, marking the beginning of the iconoclastic crisis, which was ended – provisionally – by the Council of Nicea in 787. The ban on images, to be resumed in 813 by Emperor Leo V, however, was only the external form of a deeper drive on the part of the emperors to take into account the desires and interests of their rural populations. Here, “concerns related to heresy and divine punishment” probably played a part (Cheynet 2008: 130). This iconoclastic approach reflected a concern for the defense of the empire (Ahrweiler 1976: 194) as well as an attempt at centralization. Byzantium reorganized the administration and the army. The reform was based on the creation of themes, or administrative and military regions, each expected to provide

²¹ Moreover, like the Eastern Turks, the Khazars developed a dual sacred kingship, imitated by the Magyars. There was the sacred king, who was accountable for rainfall, drought, and other cosmic events, and another chief, “who essentially functioned as the executive king” (Czegledy 1966). We know of similar dual kingships in Africa (see de Heusch 1997: 226–228).

a contingent of soldiers. A parcel of land was granted to each soldier in exchange for his military service, which was also expected of his descendants. The theme system – perhaps already begun under Heraclius (610–641) – would later lead to the rise of a hereditary aristocracy of military commanders, whose interests would clash with those of the central government. During the eleventh century, emperors preferred to use mercenaries.

The eighth century ushered in a period of development and economic integration among the various regions of the Afro-Eurasian world-system. This century and the next one were marked by strong demographic growth, primarily in India, then in China and Muslim western Asia (Bosworth 1995; Chandler 1987).²² The latter two regions underwent urbanization. Baghdad may then have been the most populous city in the world, along with Chang'an.²³ Fourteen urban areas in China were home to over 170,000 households during the eighth century. Four of the largest cities in the world were located along the Silk Roads (Rayy, Nishāpūr, Bukhara, and Samarkand), a sign of these trade routes' importance. The Silk Roads and the northern "route of the steppes" – which developed in parallel (Christian 2000: 7–9) – explain the rise of the kingdom of Khazaria.²⁴ For this kingdom, as for the Kōk Turkish and Uighur empires, "a 'structural' alliance [was forged] between emperors and merchant communities"; this "partnership" spurred the movement of people, goods, and ideas along the routes of Asia (Di Cosmo 1999a: 27). The Byzantine Empire allied itself with the Khazars as early as 626. This alliance was renewed under Leo III, who restored Byzantine military power. North of Khazaria, a Bulgarian state developed in the Volga valley; it exported furs, honey, and slaves to Khazaria and Khwarezm.

Around 900, Muslims from this region reached the city of Bulgar (near Kazan), where the elite converted to Islam; the Bulgar state issued silver coins during the tenth century (Roux 2003).²⁵

Large Indian kingdoms, located centrally within the Asian area, participated in the world-system's process of growth,²⁶ although ceaseless fighting between states led to major decimation of their wealth: these states included the Rāshtrakūta kingdom of the Deccan, which welcomed the Muslims on the western Indian coast; the Gurjara-Pratihāra Empire, which controlled Ujjain and the middle Ganges valley; the Pāla

²² According to some estimates, the population of Byzantium may have risen during the seventh century, perhaps reaching 800,000 inhabitants around 650 (Brown 2001: 106, according to Runciman 1958). However, W. Treadgold (2001) sees a population in decline with 100,000 inhabitants around 750, when Byzantium was affected by cyclical plague epidemics. And I. Morris gives an estimate of only 125,000 inhabitants in 700, against 450,000 in 500 CE (2013: 151).

²³ Some estimates give 2 million inhabitants at Chang'an during the eighth century. Morris, however, gives only 175,000 inhabitants for Baghdad in 800 CE, whereas Chandler estimates Baghdad at 900,000 in 900 CE, a figure questioned by Morris (2013: 150).

²⁴ It may be via this region (Khazaria) that the crossbow (a Chinese invention) reached Europe once again (crossbows were used at the battle of Hastings in 1066). In 1139, the second Lateran Council condemned their use, except for actions against infidels.

²⁵ In 922, the Abbasid caliph sent an embassy to Bulgar, with the scholar Ibn Fadlān, who described his encounter with a group of Viking merchants.

²⁶ Various authors have criticized A. Wink (1990) for underestimating the role played by the Indian states and merchants; Wink views the development of a Muslim hegemony within the world-economy of the Indian Ocean (see Subrahmanyam 2005b: 52).

kingdom of Bengal; and more importantly, the Pallava kingdom of the Coromandel, whose Hindu rulers also sponsored Buddhism. Unlike China during the Tang period, the Indian states were weakly centralized.²⁷ While some urban decline can be seen in northern India after the demise of the Gupta Empire, it had neither the significance nor the breadth that some historians have suggested. Nor did true demonetization occur. In fact, advances were made in agriculture, and trade remained active, both in the interior and along the coasts, related – in the case of western India – to the Muslim expansion. During this period, large guilds emerged in South India and Indian cultural influence spread beyond the Bay of Bengal. Between India and Southeast Asia, a common culture was created, built by merchants and men of religion. Exchanges spurred the expansion of major Insulindian states, influenced by Buddhism and Hinduism (such as the thalassocracy of Srīwijaya in Sumatra, considered as an empire of city-states [Manguin 2000c], and the agrarian states of central Java).

The western coast of India was in contact with the Persian Gulf. The Gulf was a preeminent region under the Umayyad and Abbasid caliphs, with active ports in Mesopotamia (Baṣra), on the Iranian coast (Sīrāf), and in Oman (Suhār), whence ships sailed for China and East Africa. The Persian language became a *lingua franca* throughout the southern seas. The period between the eighth and ninth centuries was marked by an increase in trade and the spread of knowledge between China, India, and the Muslim Empire, fostered in the latter case by the adoption of Chinese techniques in paper manufacturing. Muslim trade networks took over from previous attempts to penetrate the Asian area, at the Greco-Roman time and later during the Sassanid period. This occurred within the framework of a caliphate looking kindly upon merchant activities (Gaborieau 1995b: 431). Muslim merchant communities flourished throughout the Indian Ocean, and as far as southern China, in some cases forming the nuclei for the later spread of Islam.

This was the case in East Africa, where increasing oceanic trade went along with a progressive adherence to Islam, all within an emerging Swahili culture, with key regions in the Lamu archipelago, Pemba, the Strait of Zanzibar, and southern Mozambique. The integration of the East African coast into the Afro-Eurasian world-system led to the progressive transformation of this coast into a semi-periphery of this system;²⁸ partly islamized elites acted as interfaces between dominant cores and generally dominated peripheries. Interconnected networks operating among various maritime areas brought African products and slaves into China, carried by Arab and Persian merchants, and also by Austronesians, who continued to sail into the western Indian Ocean. The cosmopolitanism of the networks and large ports of the Indian Ocean and China was already noteworthy at this time.

The new phase of expansion for the Afro-Eurasian world-system had started in Tang China at the beginning of the eighth century. It was also in China that signs of a downturn occurred, as early as the second half of the eighth century and more importantly during the ninth century, following a short “Indian summer” (from 820 to 860), when the first sizeable private enterprises emerged in China. Monetary

²⁷ Adshead (2004) correctly points out that the various Indian powers do not show integration and organizational efficiency at the same level as those of the Chinese state.

²⁸ The East African coast would become a semi-periphery from the tenth century onward.

difficulties led to innovations in the domain of credit, and the first bills of exchange appeared from 806 to 820. China at last lost control of Central Asia; a decrease in trade occurred, worsening the internal contradictions in Chinese society, contrasting the wealth of large landowners and the merchant class with a growing mass of landless peasants. Revolts and lootings increased, while epidemics affected the coasts. In the middle of the ninth century, amid a sudden climate of xenophobia, and also for economic reasons, the Tang emperor proscribed Buddhism and other foreign religions. Global climatic cooling during the second half of the ninth century aggravated the trends already at work, which then triggered social disorder, while the empire closed itself to the outside world. Until this time, Persian and Arab ships had sailed to China, but in 879 the massacre of Muslims at Canton by a rebel leader put an end to these distant travels and marked a return to the previous triple segmentation of trade within the area of the Indian Ocean and the China Sea (Chaudhuri 1985).²⁹ These changes also correspond to the restructuring of western Indian Ocean networks, showing a relative decline of the Persian Gulf as compared to the Red Sea and the redeployment of Persian networks. In Central Asia, disorder occurred at the start of the tenth century, linked to increased aridity (southward Kyrgyz movements, intrusion of Oghuz into Transoxiana, and so forth) (Brown 2001: 186).

For its part, Egypt suffered from low Nile floods affecting agricultural production. As we know, this phenomenon is linked to weak monsoons in South Asia.³⁰ At the same time, Mesopotamia was undergoing a process of aridification that most likely played a role in the decline of the caliphate. This climatic deterioration accentuated ecological problems affecting some regions as well as imbalances linked to demographic growth and excessive urbanization. The decline also had structural causes, including overextension of the empire, weak state centralization, excessive taxes on the peasantry, insufficient resources, and the wide use of servile labor. This decline can already be observed at the end of the eighth century, when the Idrisid amirs of Morocco rejected Abbasid authority and founded an independent Shia emirate. From 800 on,

²⁹ The Muslims, however, would later return to the Chinese coasts, as shown by the size of the Muslim communities in the ports of Quanzhou, Fuzhou, Wenzhou, Mingzhou, and Hangzhou at the beginning of the eleventh century (Clark 2009: 27).

³⁰ Quinn (1992) has listed 37 episodes of low Nile flooding during the eighth century (most of them during the second half of the eighth century), 28 during the ninth century, and 25 during the tenth century (with particularly low flooding in 842, 907, and 967). Brown notes that the ninth and tenth centuries were a period of meteorite showers, a fact which may have added to climate cooling; this cooling affected Europe (it was a short cool phase within a broadly mild period lasting until around 1275) and China around the middle of the ninth century (2001: 100–101). For Moberg *et al.* (2005), a cool phase affected the Northern Hemisphere during the first half of the ninth century; while the Nile was seeing relatively frequent episodes of low flooding in that period, the ENSO (El Niño–Southern Oscillation) phenomenon appears to have intensified from 800 onward (Anderson 1992: 194, 197; Burroughs 2001: 234; Langton *et al.* 2008). Partly contradicting Chinese and Egyptian data, Mann and Jones (2003) show global climate warming during the second half of the ninth century, interrupted by a temporary decrease in temperature in the early tenth century (just after 900); Fagan signals a shift northward for the Mediterranean ecotone (2004: 208). For his part, Burroughs notes a slight drop in temperatures in the Northern Hemisphere around 920. In addition, in 934, a major volcanic eruption occurred in Iceland (the Eldgjá volcano). These somewhat inconsistent data for the ninth century reveal irregular climatic conditions. Central Thailand was affected by drier conditions between 860 and 950 (Lieberman 2003: 225).

the Aghlabid emirs from Ifriqiya (Tunisia) recognized the suzerainty of the Abbasid caliphs only nominally. While Muslims acquired a foothold in Sicily in 827 and subdued this island in 878 (when they took Syracuse), the caliphate's political setbacks accelerated during the second half of the ninth century. Egypt and Palestine became all but independent under the rule of the Tulunids (in 868). Central Asia and most of Persia emerged from under Abbasid control after the Samanid (Sunni) (874) and Saffarid (Shia) emirates (867) gained either independence or autonomy (the Ṭāhirid governors of Khorasan [821–873] were already virtually independent). Arabia itself was partly lost after the emancipation of the Ziyadids (818), the constitution of a Zaidi emirate (Shia) in Yemen (868), and a successful Qarmatian revolt in eastern Arabia (899). These political difficulties added to the economic decline of the empire, struck by famine and epidemics. The Zanj slaves rebelled during the ninth century in Mesopotamia, against a backdrop of Shiite protest movements that crystallized the discontent of farmers and impoverished urban classes. It has been said of the tenth century that it was the “Ismaili century” of Islam. In 909, Shiite Fatimids took power in Ifriqiya, and conquered Egypt in 914. In the east, the Buyid emirs (Shiites) controlled Persia from 913 on and gained power at Baghdad in 945. They held political power, keeping the caliph in place only as a spiritual figurehead. This period's difficulties are seen in the birth of conservative or heterodox movements in the various cores. The Hanbali school thus developed in the Muslim world, at a time when the Tang Empire was forbidding foreign religions (whereas the second iconoclastic period at Byzantium ended in 843), and the Qarmatians expanded during the tenth century, as mentioned previously.

The economic recession and decline in trade was affecting most regions of the world-system by the end of the ninth and the first third of the tenth century. The revolts and civil wars devastating the Abbasid caliphate in the west were mirrored in Chinese events. The Tang dynasty finally lost control over the provinces and closed itself to the outside world in 906. The Carolingian Empire disintegrated in 840 and the Uighur Empire succumbed to the Kyrgyz, in Central Asia, in the same year.³¹ Soon afterward, the Tibetan kingdom disintegrated. Between 900 and 1000, the overall population of the 25 largest cities in the world fell by a quarter; Chang'an and Luoyang were no longer among the biggest cities, and Baghdad went from one million to 125,000 inhabitants (Bosworth 1995). In much of the Asian world, signs of silver shortage were obvious (Deyell 2001: 414). In India, the three rival powers of the Gurjara-Pratihāra, the Pāla, and the Rāshtrakūta, exhausted by their continual wars, experienced a near-simultaneous decline (at the end of the ninth century for the Pāla, in the early tenth century for the Gurjara-Pratihāra, after 967 for the Rāshtrakūta). However, trade remained brisk between India (Bengal, Orissa, Coromandel, Malabar) and Southeast Asia, where Srīwijaya was still preeminent (Manguin [2004b] has

³¹ By contrast, the unification of the Khitan was achieved during the early tenth century, between the fall of the Chinese Tang dynasty and the emergence of the Song state (Di Cosmo 1999a: 13). The weakening of powerful central states can help independent entities rise at their peripheries. The formation of a Turkish empire during the mid-sixth century, at a previous phase of the world-system, has already been emphasized.

correctly noted its prosperity during the ninth and tenth centuries).³² It seems that the urban population of India increased slightly at this time.

During the ninth and tenth centuries, in the western Indian Ocean, both Egypt (under the Tulunids and then the Fatimids) and Yemen acquired new importance in the exchange networks. Demand for East African products – gold, ivory, slaves, and copal, in particular – fostered the development of the Swahili culture and triggered its expansion toward the Comoros and Madagascar. However, links with the Persian Gulf remained strong. By merging with Austronesians, migrants arriving in these islands helped form the Dembeni culture in the Comoros and created the first trading settlements in northern Madagascar, although these settlements were still few and very small. Madagascar was known by the first Arab geographers only as a land of legends confused with countries in Southeast Asia known as Waqwaq. This term also referred to the Sofala coast.

Following a long recession, Byzantium knew fresh prosperity under the reign of Basil I (867–886) and onward, with the development of silk production, accompanied by a systematic division of labor and an artistic revival. Basil and his successor Leo VI reinforced the imperial fleet and extended the ancient model of the maritime *themata* (military units), which were required to equip their own fleets. During the second half of the tenth century, taking advantage of the weakening Muslim Empire, Byzantium conquered Syria, Crete, and Cyprus, and took control of Armenia and southern Italy. During this expansion, one notes the relative absence of great Byzantine merchants and large merchant guilds, with foreigners such as the Rus (from a Finnish term for Swedes) and the Italians taking on a growing share of long-distance trade (Adshead 2004: 98). In Italy, Amalfi and Venice managed to break away from Byzantine suzerainty and ushered in a model of mercantile city-states that would later prove vital. The Byzantine rebirth favored the advance of Christianity around the empire, marked by the evangelization conducted by Cyril and Methodius in Great Moravia. In Bulgaria, Boris I became a Christian in 864. Under Simeon I (893–927), the Bulgarian state threatened Byzantium, which was besieged several times. In order to counter the Bulgarians, Basil II (958–1025) chose to ally himself with the Russians at the end of the tenth century. Prince Vladimir of Kiev converted to Christianity in 988, and married the sister of the Byzantine emperor, who formed a Varangian guard of 6,000 men.³³

Commercially connected to the Black Sea and the Muslim world, northern Europe also appears to have been expanding. It benefited from milder climatic conditions during the eighth, ninth, and tenth centuries,³⁴ and this allowed for better harvests and

³² By contrast, it is difficult to agree with H. P. Ray (2003: 18) when she describes the ninth century as a period of increasing trade in the western Indian Ocean.

³³ The Greek name for Vikings from Sweden or the Rus was “Varangians.”

³⁴ However, “tree rings reveal cold summers [in Scandinavia] between 780 and 970 AD” (Grove 2002: 315). A glacier near Lake Gjuvatnet expanded about cal. 770–818 CE. In western Europe, severe winters have been recorded in 821/2, 845/6 and 859/60; glaciers in the Alps expanded between 800 and 850 (Grove 2002: 316). As noted above, the average temperature in the Northern Hemisphere decreased soon after 900, and later increased again (see Mann and Jones 2003; Moberg *et al.* 2005; Mann *et al.* 2008). Brooke (2014: 356) sees “a solar minimum and coincident volcanic eruptions around AD 900.” For eastern Asia, “tree ring summer temperature estimates show a cold spike slightly after AD 900” (2014: 368). Northern Europe’s

triggered demographic growth. During the ninth and tenth centuries, declining trade along the north–south routes led the Scandinavian Vikings – “the men from the bays” – to trade or to go on raids³⁵ in western Europe. This led to the founding of Viking colonies in the British Isles (from 865 onward) as well as in Ireland, Iceland (870),³⁶ and Normandy, where the French king Charles the Simple authorized them to settle in 911. From Iceland, Eric the Red reached Greenland in 985, and his son Leif Eriksson reached Newfoundland (the Vinland) around 1000. The Swedes (or Varangians, from an Old Norse term) traded with Novgorod and the Black Sea. The Rus besieged Byzantium in 860. They helped form the first state of Kiev (882),³⁷ where Greek Christianity was introduced in the tenth century. Through these traders, who brought along slaves, furs, and amber, silver from the Abbasid world flowed toward northwestern Europe – along with cotton and silk. This flow declined, however, as of the ninth century. In northern and eastern Europe, 200,000 silver coins from the Muslim world have been unearthed, 60,000 of these from the island of Gotland and 45,000 from elsewhere in Scandinavia (Findlay and O’Rourke 2007: 78). Many coins have been discovered along the Dniepr and Volga rivers. It is possible that, to a certain extent, this influx of Islamic silver coins via northern Europe facilitated the minting of a silver denier by Charlemagne (Findlay and O’Rourke 2007: 80). The discoveries of Asian glass beads in Scandinavian and German tombs have been mentioned earlier. A statue of Buddha dating to the eighth/ninth century was excavated in 1954 on Helgö Island, in Sweden. There is a clear link in eastern Europe between state formation and increasing trade with the Muslim world.³⁸ The Asian cultural effervescence may also explain the fact that the Byzantine emperor Badras “revived the imperial university” in 863 in Constantinople; in any event, Muslim influences are indeed seen in the creation of the university of Salerno (which specialized in medicine) in southern Italy, during the tenth century. During the eleventh century, Constantine the African is thought to have been “[one of] the first translators and introducers of Arabic science in the Occident” (Goody 2007: 226). In turn, Salerno influenced the creation of the university of Bologna at the close of the eleventh century.

Changes in Asia affected trade and the political situation of eastern Europe in the late tenth century. Populations were on the move. During the late ninth century, the

summer temperatures, reconstituted by J. Esper *et al.* (2014) from tree-ring density records, however, do not show a decrease in these temperatures during the early tenth century; they reveal a peak c. 950. Grove also notes “20–30 years of Summer warmth around 930” (2014: 315).

³⁵ The damage caused by the Vikings has now been largely reassessed (see Boyer 2008). Irregular climatic conditions during the ninth and tenth centuries may also have played a role in the Vikings’ movements; the climate, however, remained relatively warm (see Esper *et al.* 2014). The raids often targeted monasteries (which “served as the safety deposit banks of their day” [Denemark 2016]) and trade centers, for example in 799, at the mouth of the Loire valley, or in 810, in Friesland.

³⁶ Sea surface temperature in the northern Atlantic in summertime rose significantly at the end of the tenth century (Berner *et al.* 2011).

³⁷ Prior to Kiev, the Varangians had formed a state at Novgorod (862). Kingdoms emerged during the ninth century in Denmark and Norway, a process linked to Carolingian expansion.

³⁸ D. Adamczyk 2006. This author is correct in drawing a parallel with the rise of states in sub-Saharan Africa during the same period.

Petchenegian Turks, from a region east of the Volga, crossed the Dniepr River, forcing the Magyars who had settled in this area to migrate toward Pannonia, a region that would later become Hungary.³⁹ One found virtually no dirhams in Russia after 975. The fall of the Samanid dynasty in eastern Iran mirrored the downturn of Khazaria during the tenth century, due to trade recession and growing aridification in the region. The Rus state at last subjected Khazaria and devastated the Bulgarian state of the Volga.

The world's population reached 250 million in 1000. It had perhaps already reached that number in 100 CE (Burke III 2009b); this reveals the scale of the recession affecting the Ancient World between the third and sixth centuries. During the closing years of the tenth century, however, Europe experienced growth in agricultural production, population,⁴⁰ and trade. The emirate of Cordoba conquered the Maghreb in 973, and exerted a broad political and cultural influence.⁴¹ This upturn was still more pronounced in Asia. Trade in the Indian Ocean became reorganized: the Fatimid

Table 1.In.1 *Comparative chronologies (seventh–tenth century): China, Central Asia; India; Southeast Asia*

China, Central Asia	India	Southeast Asia
581–618: unification of China by the Sui dynasty		<i>eighth century</i> : Javanese kingdom of Walaing (central Java)
609: division of the Kōk Turk Empire into two parts, eastern and western		684: emergence of Śrīwijaya
618–907: unification of China by the Tang dynasty		695: first Śrīwijaya embassy in China
China occupies the oases of Central Asia. End of the eastern Kōk Turk Empire	711: capture of Daybul by Arab Muslims	<i>early eighth century</i> : Javanese dynasty of the Sailendra
751: defeat of a Chinese army against the Muslims in Sogdiana (Talas)	Preeminence of the Gurjara-Pratihāra in northern India;	<i>seventh–ninth century</i> : state of Dvāravati
755–763: revolt of An Lushan	Rāshtrakūta, in Deccan; Pāla in Bengal; and Pallava on the	<i>eighth century</i> : emergence of a Khmer state
763–907: second Tang period	Coromandel coast	
745–840: Uighur Empire in Central Asia		
758: looting of Canton by Muslims	Significance of merchant guilds	<i>ninth–tenth century</i> : Javanese kingdom of Mataram
c. 800: peak of the Tibetan kingdom formed around 600 CE	<i>late ninth century</i> : the Chola supersede the Pallava in south-eastern India	927: shift of the capital of Mataram to eastern Java
879: the rebel Huang Chao massacres the foreigners at Canton		

³⁹ The Magyars may have originated in the Dzungaria–Altai region.

⁴⁰ The increase in average global temperature during this period largely explains this progress in agriculture (see below).

⁴¹ Abd al-Raḥmān III (912–961) took on the title of caliph in 929. Hakam II (961–976) assembled a vast library at Córdoba. There were more than twenty schools in the city at that time, and I. Morris gives an estimate of 200,000 inhabitants in Córdoba in 1000 CE (2013: 150). In 997, the general al-Mansūr (“The Victorious”) took Santiago de Compostela. Access to gold from Ghana enabled the caliphate to issue gold coins (Findlay and O’Rourke 2007: 60).

caliphate secured the routes of the Red Sea, whose importance was growing at that time; the Chola were asserting themselves as a maritime power in South India; and more importantly, China, reunified by the Song between 960 and 980, experienced spectacular internal development, both economic and intellectual, that would trigger economic and commercial growth in the Indian Ocean and in the entire world-system.

Table 1.In.2 *Comparative chronologies (seventh–tenth century): western Asia, the Persian Gulf, Arabia; Red Sea, Arabia; East Africa, Madagascar; Europe, the Mediterranean*

Western Asia, the Persian Gulf, Arabia	Egypt, the Red Sea, Arabia	East Africa, Madagascar	Europe, the Mediterranean
622: Muhammad travels to Medina	642: Muslim conquest of Egypt and Libya		
632: death of Muhammad			
636–651: Muslim conquest of Syria, Mesopotamia, Persia			
661: death of ‘Alī			
661–750: Umayyad dynasty (capital: Damascus)	670–702: Arabs take northern Africa	<i>eighth century</i> : sites on Mayotte	711–718: Arabs take the Iberian peninsula
680: death of Husayn at Kerbela		<i>eighth century</i> : <i>Sandrakatsy phase</i> (Bay of Antongil); <i>human presence in Vakinankaratra</i>	718: Arab defeat at Covadonga
750–: Abbasid dynasty (capital: Baghdad). Preeminence of the Persian Gulf in trade with South Asia		<i>late eighth century</i> –: first mosque at Shanga (Pate Island)	751–987: Carolingians (768–814: reign of Charlemagne)
<i>ninth century</i> : dislocation of the Abbasid Empire		<i>ninth–thirteenth century</i> : Dembeni culture (Comoros)	
869–883: revolt of the Zanj in Mesopotamia		Sites in the Lamu archipelago, Qanbalū (Pemba), Unguja Ukuu (Zanzibar), Chibuene (Mozambique)	
874: Samanid autonomy (Transoxiana, Khorasan)		<i>ninth century</i> : <i>settlements at Irodo</i> (northeast coast) and <i>Mahilaka</i> (northwest coast). <i>Maliyovola period</i> (Anosy)	
894: Qarmatian control over Bahrain			
901, 906: Shiite uprisings	901: Zaydi domination in Yemen	945: Austronesian attack on Qanbalū (Pemba)	Flowering of the emirate of Córdoba
945–1055: domination of Buyid emirs (Shiites)	909: Fatimids in Tunisia		Revival of Byzantium
	973–: Fatimids in Egypt		976–1025

CHAPTER

1 Tang China and the Rise of the Silk Roads

In search of pearls, he harnesses the glaucous sea. In the north, he buys the Tangut horses. In the west, he catches Tibetan parrots. [He acquires] fire-washed linen from the Continent of Flames [asbestos from southern countries], perfectly woven tapestries from the Land of Shu [Sichuan], slave girls of Yueh, sleek of buttery flesh, houseboys of Hsi [Manchuria], bright of brow and eye.
(description of a trader by Yuan Chen [779–831], Schafer 1997: 44)

Ever since the Western horsemen began raising smut and dust, fur and fleece, rank and rancid, have filled Xian and Luo, women make themselves Western matrons by the study of Western makeup, entertainers present Western tunes, in their devotion to Western music.
(Yuan Chen, Schafer 1997: 28)

All women from the palace who accompanied the procession of the emperor wore foreign hats; they no longer hid their face behind a veil; they started to gallop on horseback, hair in the wind, even wearing masculine clothes.
(*Tangshu*)

The Reunification of China by the Sui Dynasty (581–617)

Despite the divisions of China during the sixth century, commercial and diplomatic contacts developed between Iran, Central Asia, and northern China, as well as between the Yangtze region and Southeast Asia. At the end of the sixth century, the Chinese political situation experienced a major change: an official from the Northern Zhou state, Sui Wendi, became emperor of northern China in 581, and then reunified China in 589. This reunification was the political expression of a movement of growth in exchanges and production, and the result of political and social transformations undertaken by the Eastern and Western Jin, the Liang, and the Toba of Wei (see above). The Sui took several initiatives that would have profound effects on later Chinese history. Unlike the Northern Zhou, they actively supported Buddhism and favored its spread. They introduced a system of written examinations for the recruitment of officials. They undertook the building of Great Walls in the north, and the digging of a network of navigable waterways between the Yellow River and the Lower Yangtze (as far as Hangzhou); this network was extended by a 1500-km-long Great Canal between the regions of Luoyang and Beijing. In 610, the canal stretching from the Yangtze to Chang'an and Luoyang permitted the transportation of grain to these cities, near which huge granaries were

built. The capital, Daxingcheng (Chang'an), exhibited careful planning, with avenues intersecting at right angles. It had 600,000 inhabitants in 600 CE, according to Morris's estimates (2013: 155). These major public works played a crucial role in China's later economic growth during the eighth and ninth centuries (Gernet 1999: 209–211). The second Sui emperor, Yangdi, embarked on a policy of maritime expansion, using a war fleet including five-decker ships, each carrying up to 800 men (Deng 1997: 30). Overseas shipments benefited from advances in shipbuilding – with the adoption of an axial rudder already in use during the first century¹ – and spatial location (Deng 1997: 39, 41). A Sui fleet was launched against Linyi in 604–605.² In 607, another fleet, loaded with five thousand silk rolls, left Canton to go to Chitu (Ch'ih-t'u), perhaps located on the Thai–Malay peninsula, in the Phatthalung region or south of Langkasuka.³ In 610, a fleet that had recruited “men from various southern countries” (*Kunlun* people) put to sea at Chaozhou (Ch'ao-chou) and sailed to Liuqiu (Liu-ch'iu) (Taiwan, or more probably the Ryūkyū Islands). In addition, there was a significant trade revival along the Silk Roads. According to An Jiayo (1981: 9), the arrival of glass workers from Central Asia may explain the manufacture of soda-lime silica glass in China from the Sui period onward.

Tang China (618–907): Buddhism, Long-Distance Trade, and the Development of Markets

“The Golden Age” (618–755)

In the aftermath of Yellow River floods, unsuccessful wars against the Korean kingdom of Goguryeo (612, 613, and 614) and clashes against the Turks in 613, peasant revolts broke out and the general Li Yuan seized power in 617. He founded the Tang dynasty in 618 and adopted the name of Gaozu (618–626); his son Li Shimin succeeded him, taking the name of Taizong.

The Tang dynasty enjoyed a period of great prosperity, particularly until the mid-eighth century.⁴ It was partly based on military supremacy and an efficient administrative organization. Taizong (627–649) reformed the administration, the law code, and land tenure, which weakened the old aristocracy. The Tang emperors developed a system of exams for the recruitment of officials, and schools were created which prepared the candidates.⁵ State departments framed governmental decisions; these were later presented to the emperor.⁶ The army was organized on the basis of

¹ And not during the fourth century, as J. Gernet writes (1999: 288). See above.

² The capital of Linyi (probably Tra Kieu) was taken. Expeditions were also launched toward Korea (in 598, 612, and 614).

³ Wang Gungwu 1958: 68; Pluvier 1995: map 4. Some authors have located it on the southeastern coast of Sumatra (Gernet 1999: 208). The expedition also went to Locha (Lo-ch'a), which has not been satisfactorily identified (Wang Gungwu 1958: 65 n. 18).

⁴ Adshead (2004: 69) indicates that “the size of the [Chinese] economy more than doubled” between 500 and 1000.

⁵ Wong (1997: 96) points out the contrast with Europe: the Chinese state had responsibility for the education of officials and the population, while in Europe, education was left to the Church.

⁶ Adshead (2004: 46–47) speaks of “bureaucratic constitutionalism.” The administration consisted of four main organs: a Department of State (which supervised the public service, finances, religious rites, armies, justice, and public works); the Imperial Chancellery; a Great General Secretariat, and a Council of State.

“divisional militia” of tax-exempt farmer-soldiers, a system first employed by the Western Wei and the Northern Zhou; it benefited from the increasing use of armor and crossbows, and from proper training. An army composed of professional soldiers was later set up within the context of the Tang expansion to the north and northwest. “The sources for the early eighth century suggest that the Tang had about half a million men under arms . . . Tang military power rested on the fusion of steppe heavy cavalry with mass infantry developed by the states of Northern Wei and Northern Zhou and the successor Sui dynasty” (Morris 2013: 208). Interventions of the state secured the stability of the social order (Wong 1997: 98). A system of land (re)distribution ensured “the regularity of the revenue from taxes”⁷ and promoted a class of free farmers, who formed the basis of the army.⁸ Diminishing taxes and corvées also benefited agriculture, which advanced both in techniques and through an increase in land cultivated (especially for rice). In addition, China enjoyed a milder climate and increased rainfall after the end of the sixth century (during the seventh and more importantly the eighth centuries).⁹ The square-pallet chain-pump, which allowed water to be lifted – a device invented as early as the first century CE – was widely used, as well as norias (perhaps introduced from the Muslim world). Harrowing and plowing were encouraged, and rice transplanting was adopted in the Yangtze basin and southern China during the eighth century. One of the world’s first known farming handbooks was written during the eighth century. Moreover, the Tang favored territorial extension southward (Yangtze basin, Lingnan) which was “crucial in providing a sizeable external area (comparable in many ways to the discovery of America for Europe during the sixteenth century)” (Norel 2007). The Yangtze basin and the southern regions experienced a sharp increase in population: there were 3 million taxable individuals in 600 and 10 million in 742. The growing sinification of the southern regions led to tensions with indigenous populations; in 669 in particular, the Tang had to send troops into

The empire was divided into ten and later into fifteen regions, “to which Administration inspectors, Tax inspectors and Justice inspectors were attached.” These services were controlled by an Office of General Inspectorate of the Administration. Other departments were responsible for canals and waterways, shipbuilding workshops, and the state university.

⁷ Gernet 2002: 246. The fiscal system was inseparable from the practice of censuses and detailed cadastral knowledge. Taxes were paid in grain and silk, which was the main currency in China during this first Tang period: according to E. H. Schafer (1997: 8), a grain tax was paid by each adult male; each family was taxed on woven products, and took part in corvées. “Throughout Chinese history,” P. Norel notes (2005), “the imperial power tried to prevent the ‘natural’ formation of large-scale private properties, which were detrimental to tax collection . . . The political power implemented this policy by regularly redistributing lands to families of soldiers or by establishing settlements at the borders of the empire.” M. Elvin (1973: 61–63), however, points out the unstable character of the “fair system of land distribution,” with small farmers being forced to sell their properties. Moreover, slavery was still practiced on a significant scale in agriculture.

⁸ Elvin (1973: 54–56) observes a similar evolution in the Byzantine Empire, with the institution of themes, or *themata*, and farmer-soldiers. During the Tang period, the tax rate does not seem to have been higher than 10% of the household’s total income (Deng 1999: 89).

⁹ Z. S. An and L. G. Thompson (1998: 20, 28) identify wetter conditions between 625 and 975 for the semi-arid regions of China, with a peak around 825. In “semi-humid” China, two phases of higher rainfall are noticeable between 575 and 625 and later between 720 and 1175. Curiously, S. A. M. Adshead (2004: 70) speaks of “cooler and wetter” conditions between 500 and 1000 in northern China, but he does not give his sources.

southern Fujian (Clark 2009: 18). Northern China, however, remained the most populated region. The capital of the empire, Chang'an, had more than one million inhabitants (Morris 2013: 155), and was probably the largest city in the world at this time. Luoyang was also a sizeable city. Fourteen urban regions in China had more than 170,000 households. According to Adshead, the level of urbanization increased from 5 to 20 percent of the population from the beginning to the end of the dynasty.¹⁰

The economy was strictly regulated: the state controlled weights and measures, prices,¹¹ and the quality of products, partly through associations of merchants and artisans (*hang*) organized by the political power. The Tang government intervened in grain storage and transport; it secured the roads, thus facilitating trade, from which it benefited, notably through a system of internal customs. Everywhere “there were shops and emporiums for supplying merchant travelers; mules and horses were available to travelers” (Schafer 1997: 8). A postal service with posthouses and horses was set up throughout the country. Public control did not prevent commercial freedom, especially through village markets, which were being established on a daily basis (Elvin 1973: 165–166; Norel 2005). The development of an internal market was stimulated by the growing monetization of the economy. While copper coins had been instituted in China under the Former Han, the Tang introduced the bronze coins that would serve as templates during the following centuries.¹²

Growth in output and improvements in means of transportation led to the setting up of interregional commercial relations. This process was accompanied by geographical specialization, not only in products for the Chinese market, but also in products for foreign trade, which prefigured the integration of the Song period. “[Tang] economic dynamism,” as P. Norel points out, was linked to significant institutional changes: “the territorial expansion of local markets, the organized marketing of basic necessities on a national basis, the emergence of a land market despite uncertain property rights, and the development of free labor. In sum, the Tang dynasty created markets for factors and an incipient system of markets, whereas China had previously had only local markets for goods with poor links between them. Technological innovation could then be implemented and made profitable thanks to these markets for factors” (Norel 2005: 438ff.) (see also Elvin 1973: 166).

The development of porcelain allowed exportation of this luxury product to increase.¹³ Manufactured at Gongyi (Henan), the first pieces of “blue-and-white,” containing cobalt imported from Iran,¹⁴ are dated to this period. This innovation, as well as the rise of the

¹⁰ Adshead 2004: 107. Twenty-five urban regions had more than 500,000 inhabitants each.

¹¹ The *Account of China and India* notes that the Chinese state intervened in the grain market when prices were too high: “Whenever there is a rise in prices, the king releases food [grains] from his stores and sells it at a rate cheaper than the current prices in the market. Thus, inflation is averted” (Ferrand 1922a: 56; Maqbul Ahmad 1989: 48–49).

¹² These coins bore no indication of weight. The Tang emperors did not issue any gold or silver currency; however, merchants brought coins from western Asia: the discovery of Sassanid and Byzantine coins in China has already been mentioned, and dinars from the Muslim world were in use at Canton (Schafer 1997: 257). Silver was used in Gansu and in Central Asia, and in Guangdong and Jiaozhi as well (Thierry 2001: 132–133).

¹³ Porcelain manufacturing requires the firing of kaolin covered with glaze at high temperatures, which ensures clay vitrification. True porcelain was perhaps already being produced during the first century CE.

¹⁴ Recent studies also show the probable use of local sources of cobalt.

textile industry (silk) and metallurgy, appears to have been prompted by expanding internal and external market opportunities. Among the various technical innovations dating to the Tang period, one of the most important was the use of gunpowder. Its first real applications were tried out in the years 904–906 when incendiary projectiles called “flying fires” were commonly used.¹⁵ A paper industry flourished, especially in Sichuan. Woodblock printing probably appeared during the eighth century (one of the first texts to have been printed, dated to 868, has been found at Dunhuang);¹⁶ the technique spread to Korea and Japan, where Buddhist texts were printed during the ninth century. Xylography combined two processes previously used in China: sealing and stamping (Gernet 1999: 293). Some authors have suggested an influence of the Indian technique of imprints on cotton fabrics, but this technique is not well dated in India (while Alam [2002: 456] does not exclude the possibility that this technique appeared at an earlier date, he also notes that it is only properly attested from the twelfth century onward). The social transformations during this period are evidenced in painting, where individual portraits – an art form that had appeared during the Han period – became more common. There were further advances in metallurgical techniques, following the discovery of a second manufacturing process for steel production during the fifth century (through the process of “co-fusion”). Hydraulic power (with the use of waterwheels) worked the pistons of blowing-engines in foundries, and also in flour-sifting machines using a crank connecting-rod system.¹⁷ Transportation benefited from the building of segmental arch bridges (seventh century). Alcohol distillation was invented during the Tang period, or even during the sixth century,¹⁸ with possible Indian influences: a type of Indian still may have been introduced into China, along with Buddhist currents (Needham *et al.* 1980: 80).

Significant social changes went along with economic expansion. Thus, “the matrimonial regimes were geared toward the creation of market-oriented, family-run microbusinesses [Adshead 2004: 103f.]” (Norel 2009b). “These microbusinesses were well adapted to” the context of expanding textile production. “It was also because the development of local markets allowed for processes of specialization in agriculture and made the production more profitable that a labor force, essentially female, was freed up for textile manufacture, on the basis of small-scale family production [Gates 1996]” (Norel 2009b). Larger workshops also appeared, as shown by a text written by Li Fang

¹⁵ Gernet 1999: 274. “In the tenth century, a whole new wave of incendiaries appeared” (Temple 2002: 232). Temple thus describes “gunpowder fire-arrows.” The inflammable property of a combination of saltpeter and sulphur had already been noted during the seventh century. This discovery resulted from experiments probably conducted well prior to this period by alchemists looking for the magic elixir of immortality. Associated with daoism, alchemy, along with its medical applications, was popular at the Tang court.

¹⁶ Boulnois 2008: 272. As early as the seventh century BCE a technique of printing using bronze characters was being tried out. Xylography permitted the dissemination of religious and philosophical texts: knowledge of these texts was necessary for succeeding in the exam system for the recruitment of officials.

¹⁷ Temple 2002: 64–65. A sifting machine using the connecting rod-crank system is mentioned at Luoyang in 530 (prior to the Sui dynasty) in a Buddhist establishment. Piston bellows were operated in reverse mode to the operation of a steam engine: here wheels were driven by rushing water-powered pistons.

¹⁸ Needham *et al.* 1980: 136, 141ff., 150. Alcohol was called “burnt wine,” a name that would later be found in Europe (brandy). Needham *et al.* disregard this origin, despite a passage in the *Bencao gangmu* by Li Shizhen (sixteenth century) indicating that the knowledge of alcoholic distillation was acquired following the capture of Turfan, during the Tang period.

(tenth century): it recounts that a rich merchant from Tingzhou (in Fujian), during the Tang period, owned a workshop housing “five hundred looms for the weaving of silk damask,” an estimate probably exaggerated, since it exceeds the number of looms used in the imperial manufacture under the Northern Song (Elvin 1973: 174; Bray 1999: 179).

The superiority of Chinese weaponry (steel production had been mastered long before, and both crossbows and armor were improved), the development of horse breeding, and the efficiency of the military institutions contributed to the successes of the armies, and served the Tang imperialist project. The Chinese armies crushed the “hostile” Turkish populations, while other Turks chose to partner with the Chinese (Uighurs, and Tangut). Between 630 and 660, the Tang took the control of Turfān and the oasis kingdoms in the Tarim (from Kuchā and Khotan to Kashgar), thus re-establishing Chinese domination in Central Asia¹⁹ (in the face of the advance of the Tang armies, the eastern Turkish khānate disappeared in 630,²⁰ as did the western khānate in 659). Sogdiana (Samarkand and Tashkent regions) and the Ferghana valley were under the nominal suzerainty of China during the seventh century, under the reign of the emperor Gaozong (649–683), until the Arab invasions during the early eighth century (Bukhara sent emissaries to China as early as 618 and 626). During the advance of the Tang armies into Central Asia, Turks were captured by the tens of thousands and sent to China, where they helped dig canals and improve fortifications. In 649, Taizong launched a military expedition into northern India “in order to settle to China’s advantage the succession to the throne of the little kingdom of Magadha” (Gernet 1999: 221). China went so far as to intervene in the internal affairs of Sassanid Persia.

Sparked by contacts with foreign countries and reinforcing them in its turn, a taste for the exotic spread into China. It crossed all social classes and permeated various areas of life, clothing, music, and decoration (see below) (Schafer 1997: 28).²¹ China welcomed foreign merchandise, knowledge, and populations. The “cosmopolitanism” of the court and of Tang society, which aspired to be a model for the rest of the world, has often been emphasized. It was accompanied by “complexity and pluralism in thought,” which strengthened the development of critical thinking. This is manifest, for example, in the historical approach of Liu Zhiji (661–721) (Adshead 2004: 130). During the first centuries of the Tang dynasty, exchanges developed both via the Silk Roads – which retained their significance until the ninth century – and the Southern Seas, whence came “the rare and the precious,” according to the seventh-century *Suishu*.²² “The capital, Chang’an, was the meeting place for all the peoples of Asia: Turks, Uighurs, Tibetans, Koreans, people from Khotan and Kuchā, Sogdians, Kashmiris,

¹⁹ Before 589, embassies had already arrived at Chang’an, sent by the Hephtalites, from Persia, Sogdiana, and Khotan.

²⁰ An eastern Turkish khānate, however, rebuilt itself from 682 onward. It would later be overthrown by the Mongol Basmil, in 742; the Mongols were in turn supplanted by the Uighurs in 744. In the west, a western khānate was constituted from another Turkish branch, that of the Turgesh (699–740), which had Suyab and later Balasagun as its capitals (in Kyrgyzstan) (Golden 2005; Beckwith 2011).

²¹ This taste for the exotic is reflected in poems by Li Bo (eighth century), himself probably of Central Asian origin (Beckwith 2011: 127).

²² Jacq-Hergoualc’h *et al.* 1998: 268 note 6. Via these Silk Roads, the Bactrian camel spread into China; this expansion was accompanied by the invention of a new saddle for the camel (at a time not precisely determined; see Adshead 1995: 128).

Persians, Arabs, Indians, Sinhalese” (Gernet 2002: 282). Until the ninth century, China thus experienced a period of openness and tolerance, which was not without some ambiguity (Schafer 1997: 22–23).

There were significant contacts with Persia during the Sassanid period. In 638, a Sassanid embassy went to China to solicit assistance against the Muslims. In 674, the last Sassanid emperor, Peroz, went into exile in Chang’an with his government. Iranian influence is well documented for the Muslim period during the seventh and eighth centuries. The Iranian aristocratic style, which influenced the Abbasid court, was also copied by the Tang. Persians were present on both land and sea routes, as shown by the journey of the Indian Buddhist Vajrabodhi – who introduced the Tantric doctrine – from India to China via Srīwijaya in 717 aboard Persian ships,²³ the description of a Persian trade in China by Huichao,²⁴ the existence of a Persian village on the island of Hainan in 748, and the involvement of Persians in the looting of Canton in 758 (Wang Gungwu 1998: 75).²⁵

Illustrating the openness of the Tang to the foreign world, many embassies arrived in China during the seventh and eighth centuries. They brought “tributes” which in fact were trade exchanges. According to Chinese texts, they came from Linyi (Champa, 14 embassies during the seventh century, and 11 during the eighth century); Zhenla (Cambodia) in 623, 628, and 698; Geluoshifen (Ko-lo-shih-fen) (perhaps located to the west of Dvāravātī)²⁶ in 662; Duoheluo (To-ho-lo) (Dvāravātī) in 638 and 649; Panpan (on the Thai–Malay peninsula) in 635 and 650–655; Zhuloumi (Chu-lou-mi) (possibly on the Thai–Malay peninsula) in 655 and 656; Dandan (on the Thai–Malay peninsula) in 666–669; Moluoyu (Melayu, Sumatra) in 644 and perhaps 662; Shilifoshi (Shih-li-fo-shih) (Srīwijaya, Sumatra) in 702, 716, 724, 728, and 742; Heling (Ho-ling) (Walaing, central Java) in 640, 648, 666, 767, and 768; Poli (P’o-li) (possibly Bali) in 630; Ganzhifo (Kan-chih-fo) (Kāñchīpuram) in 658 and 662; Zhanbo (Chan-po) (Champa, perhaps in the Ganges Valley) in 657; Mola (in India) in 658; Shilizun (Shih-li-chun) (in India) in 658; Po’an (perhaps located in India) (in 656); Shize (Shih-tse) (Sri Lanka) (in 670, 712, 742, 746, 750, and 762);²⁷ Sogdiana in 631,²⁸ and so on. Other embassies were more politically motivated. Byzantium (called Folin) sent a mission to Chang’an in 643 – five years after the Sassanid embassy already mentioned – and later others in 667, 701, and 719.²⁹ According to the *Jiu Tangshu*, as early as 651, a Muslim

²³ Vajrabodhi found 35 Persian ships in a port in Sri Lanka, where they had come to acquire gems; he left for Palembang on one of those ships (Hasan 1928: 118).

²⁴ Huichao was a monk of Korean origin who went to India by sea and returned to China through Central Asia in 729 (Gernet 2008: 280).

²⁵ These Persians arrived aboard vessels probably from Hainan Island.

²⁶ The location of Geluoshifen, or Jialuoshifo (Chia-lo-she-fo), perhaps different from Geluo (Ko-lo) on the Malay peninsula (?), is difficult to identify (cf. the discussion on this issue by Wheatley 1961: 57–58).

²⁷ Wang Gungwu 1998: 122–123; Deng 1997: 114. Note also a mission of the *bodoli* in 643, according to the *Tangshu*; *bodoli* is the probable transcription of the Syriac name *batrik*, “patriarch” (probably Nestorian) (Hirth and Rockhill 1911: 104ff.).

²⁸ In 631, Sogdiana sought China’s protection.

²⁹ Among the presents brought by the Byzantine ambassadors was the theriac, a “universal antidote,” which according to Pliny contained as many as 600 ingredients. These embassies are recorded by the *Jiu Tangshu*.

mission, probably sent by the commander of a region of Iran, was welcomed at Chang'an (Wilensky 2002: 1). In 713, Xuanzong received emissaries from Kuteiba, the Muslim commander in Central Asia, who demanded Xuanzong's submission to Islam. In 726, the Umayyad caliph Hisham sent a third embassy.

When the Chinese court received these foreign embassies composed of dignitaries and merchants, the emperor was expected to offer more than what he had received as a "tribute": this imbalance expressed his political power and his divine nature, which made him a source of inexhaustible wealth. By accepting gifts from the emperor, the ambassadors acknowledged his political sovereignty and his superior nature. The imperial "generosity" established the value of goods that became symbols of high status in foreign countries: the tributary Chinese system thus defined ranks, "standards both of fashion and of behaviour" (Pomeranz and Topik 1999: 14). This system helped China in "ordering the world with the Chinese state at the center" (Wong 1997: 89). The Tang dynasty also pursued an active foreign policy, often using non-Chinese diplomats. Alliances were accompanied by exchanges of princesses. Taizong thus sent two ambassadors to the Indian king Harsha (a mission perhaps also motivated by economic interests, with the Chinese trying "to learn the secret of the manufacture of sugar" [Adshead 1995: 91]), and gave one of his relatives, the princess Wencheng, in marriage to the king of Tibet. In 712, the princess Yongle was sent north to marry the Khitan khān. Suzong (711–762) gave his daughter Ningguo to the Uighur khān.

Exchanges during the seventh century mostly followed the Silk Roads. The interest shown by the Tang in Central Asia – where the Chinese presence, however, came at a price – can primarily be explained by the need to import horses, even though stud farms were created in China. These horses were exchanged for silk, tea, lacquers, and iron items. The discovery of Chinese silk remnants bearing a "Persian" decoration with vines, birds, and wine drinkers in Xinjiang (Turfan, and Niya) indicates a production specifically developed for the foreign market (Adshead 1995: 92). Slaves – whether Turks or Slavs – also came from the Khwarezm, south of the Aral Sea. Dated between the fifth and tenth centuries, the manuscripts found at Dunhuang, which was a significant trade center in western Gansu, reveal the cosmopolitan character of the population of the oases in Central Asia: Chinese and Tibetan texts, as well as documents written in Uighur, Sogdian,³⁰ Sanskrit, and Prakrit, have been found. The merchants and embassies that came along the Silk Roads also brought furs, woolen cloth, cotton fabrics,³¹ brocades, carpets, aromatics, medicines, dyes, gold and silver vessels, glass items, and precious or semi-precious stones.³²

³⁰ A Manichaean presence of Sogdian origin can also be noted in China. The doctrinal flexibility of the Manichaeans enabled them to survive in China until the fifteenth century and favored syncretisms (Bentley 1993: 96). The Sogdian language served as the *lingua franca* along the northern branch of the Silk Roads in particular. Texts written in Tocharian languages, which belong to the Indo-European family, have also been retrieved in various sites of the Tarim.

³¹ Cotton was known under various names: an ancient term *tung* is of uncertain origin; other names derived from the Iranian *bagtak* and Sanskrit *karpāsa* (Schafer 1997: 205). Cotton thread and fabrics were imported from Central Asia, Nanzhao, Champa, Indonesia, Sri Lanka, India, and the Muslim world. Xuanzang describes cotton fields in the oases of Central Asia.

³² Jade from Khotan, a city controlled by the Tang Empire, lapis lazuli from Afghanistan, amber from the Baltic Sea, and malachite (Schafer 1997: 222ff.).

From the middle of the Tang period, China became more sea-oriented,³³ for the purpose of trading with foreign countries and within the empire (transport by sea was 70 or 80 percent cheaper than transport by land) (Elvin 1973: 138). One notes advances in naval technology, with the use of leeway fenders during the eighth century: these prevented ships from running aground or listing excessively. The Tang strictly controlled long-distance trade through their main ports, among which Guangzhou (Canton) held a prominent position. This city may have had 200,000 inhabitants during the eighth century, many of whom were foreigners,³⁴ probably inhabiting separate boroughs. Located at the junction of the Yangtze River and the Grand Canal, Yangzhou was another trade center with the Southern Seas, which attracted substantial numbers of foreigners.³⁵ Quanzhou (named Zaiton by Marco Polo) was also described in a poem by Bao Ho (eighth century) as a flourishing port where merchants from various countries mingled. Jianzhen (Ganjin), a monk of Chinese origin who lived in Japan, describes “the argosies of the Brahmans, the Persians and the Malays, their number beyond reckoning, all laden with aromatics, drugs, and rare and precious things, their cargoes heaped like hills” (Schafer 1997: 15). China enjoyed a trade surplus; “goods were exported in exchange for precious metals, in money or other forms” (Norel 2004: 187). The Tang knew the routes going to India via the Vietnamese coast, as shown by the itinerary given by Jiadan (730–805). The foreign presence in Chinese ports was not without tensions. In 684, for example, Kunlun merchants took revenge for a humiliation they had suffered by killing the governor of Guangzhou and his entourage (Clark 2009: 27).

In 714–715, a superintendant of maritime commerce was appointed at Canton. While this official was in charge of controlling the maritime trade, he also had to ensure that foreigners were protected. “He held authority over everything concerning imported products, . . . the state monopoly of foreign trade” (Sauvage 1948: 16). Foreign traders paid customs duties and various taxes, which could account for one-third of the cargo. Moreover, agents from the court exercised pre-emption rights over the merchandise. The state regulated prices: “Once the ships were in the port, the Chinese authorities seized the merchandise. It could be sold only when the last ship coming with the same monsoon had arrived, this in order to establish a proper price for the various imported products” (Sauvaget 1948: 16). Imports included colored glass items,³⁶ coral, ivory,

³³ Gernet 2008: 273. As early as the seventh century, however, the Tang fleet was sent against Korea (648, 663, 668).

³⁴ Abū Zayd gives 120,000 foreigners at Canton in the ninth century (Schafer 1997: 282 note 65). The *Account of China and India* mentions that “the chief of the Chinese appointed a Muslim at Canton with the power to settle disputes arising among his fellow religionists” (para. 12; Sauvaget 1948). The *Ancient History of the Tang* (*Jiutangshu*) states that the number of vessels visiting Canton went from 4 – prior to the empire – to 4,000; here, however, the text is certainly wrong (Lo 1970: 168).

³⁵ Chinese soldiers, in 760, appear to have attacked the Arabo-Persian community at Yangzhou (Salmon 2004: 34). This community must have included Buddhists, since mention was made in 838 of Persians who took part in the restoration of a Buddhist temple along with Chams (Salmon 2004: 34).

³⁶ Glass items imported from the Muslim world during the Tang period have been excavated at Luoyang, Yangzhou, in the temples at Famen (west of Xian, Shaanxi province), and Jingzhi (Hebei province) (An Jiayao 1996: 134; Ma Wenkuan 2004: 32). This glass was carried either by sea or by land. Enameled glass (in the form of plates) was found, for which Fustāt (Egypt) was the main production center. Incised plates at Famen may have come from Nishāpūr (Kröger 1999). In addition, glass of the “Islamic type has been recovered at Dong Son” (Dussubieux 2001: 202).

spices, medicines, perfumes (incense, myrrh, aromatic woods, nutmeg, cloves, and cardamom),³⁷ dyes (red lacquer from cochineal insects, brasil),³⁸ jewels, gems, pearls, rhinoceros horns, turtle shells, cotton fabrics, and slaves.³⁹ In exchange, the Chinese offered silk fabric, raw silk, lacquered items, ceramics,⁴⁰ spices, and metals (objects made of iron). The significance of the exportation of Chinese ceramics toward the Persian Gulf has been confirmed by the discovery of an Arabo-Persian shipwreck⁴¹ near Belitung Island (off the eastern coast of Sumatra), in 1998. The vessel contained more than 60,000 objects of Chinese origin, including 10 tons of lead ingots, 18 silver ingots, 2 kg of gold leaves, 56,500 ceramic items from Changsha (stoneware with painted decoration, produced for export), and the first ceramics of the “blue-and-white” type using cobalt (Krahl 2010). Some pieces reveal how Chinese production had adapted to buyers’ tastes (Salmon 2004: 34). The shipwreck has yielded about thirty silver or gold objects, including a gold cup featuring men from Central Asia. Some of these items, produced for export, may have been made by foreign artisans working at Yangzhou (Qi Dongfang 2010). The ship was probably sailing to Java. Ceramics from western Asia have been unearthed at various sites along the Chinese coasts, especially at Yangzhou and Fuzhou⁴² (strangely, not at Guangzhou, but this may be due to the fact that the ancient parts of the city have not been excavated) and inland, for example at the sites of Buddhist monasteries, at Yongxian and Guilin (Guangxi province). Ho (1994b) points out that these ceramics influenced Chinese production (Glover 2002).

China developed trading exchanges with southern Asia – Austronesians, Indians, Arabs and Persians acted as intermediaries – as well as with Korea and Japan. These countries were submerged by Chinese culture, with Chinese ships involved in trade (Elvin 1973: 137). From the middle of the seventh century, Japan had a civil government composed of nobles influenced by the Tang model. The capital, Nara, was built along plans similar to those of Chang’an; Nara has given its name to the period, which lasted until 794. By 750, “in the capital alone, an inspectorate and eight ministries supported 7,000 to 10,000 officials” (Lieberman 2009: 383). Large tax-exempt estates were

³⁷ Canton served as a warehouse for products such as aloeswood: “an Ibadite merchant of Oman went to China and bought [this wood] there in the 8th century” (Schafer 1997: 164). Perfumes and aromatics from western Asia arrived both by sea and land: “two kinds of jasmine were known to the men of Tang, one under its Persian name *yāsaman*, and another under its Indic name *mallikā*” (Schafer 1997: 123). Jasmine essential oil was primarily imported from Shiraz. The spread of Buddhism obviously played a role in the growing consumption of aromatics. Fragrant woods such as sandalwood were supposed to chase away evil spirits. The substances used by the Buddhists (especially coral, gems, and pearls) usually originated in distant lands (Helms 1988: 125).

³⁸ Schafer (1997: 211) also suggests the importation of kohl containing a dye obtained from the *Murex*.

³⁹ See below for products exported from Southeast Asia. Various vegetal food products were carried by ships and caravans: saffron, from India and Central Asia, and dates, known under various names, one “of Persian origin, and another perhaps of Egyptian origin” (Schafer 1997: 121–122).

⁴⁰ For the ninth and tenth centuries, Ho (1994a: 195) observes that “the assemblages of Chinese ceramics excavated in Southeast Asia do not appear to be very different from those unearthed in Sri Lanka or in western Asia. It appears that there were standard assortments of Chinese ceramics destined for export [at this time]” (quoted by Jacq-Hergoualc’h *et al.* 1998: 294).

⁴¹ The hull planks were stitched, without dowelling. Woods used for the planks of the vessels appear to have been of Indian origin (Flecker 2001).

⁴² At Fuzhou, three vases of the “Sassano-Islamic” type with turquoise glaze have been discovered in the tomb of Liu Hua, who died in 930 (Glover 2002: 173).

granted to members of the royal family, thus drawing up the feudal structures that would mark the following period. Exams for the recruitment of officials were introduced, following the Chinese example; however, only aristocrats could apply for the competitions. Buddhism became the state religion. In 741, Emperor Shomu issued an edict establishing official monasteries and nunneries, following the Chinese model promoted notably by the emperor Taizong and the empress Wu Zetian (690–705) (see Wong 2015). Japan exported gold, silver, mercury, and medicines to the port of Hangzhou, and adopted copper currency. Japan's monetization during this period has been underestimated by most historians (paddy and materials were still valuable means of exchange).⁴³ The treasure kept in the Shoso-in house at Nara, dated between 756 and 759, clearly shows the extent of the long-distance trade networks: it contains artifacts from Tang China, India (lutes and masks); Sassanid Persia (gilded bronze cups and silver ewers); Central Asia (carpets); and western Asia (glass).⁴⁴ Sassano-Islamic (a continuation of Sassanian) pottery shards have been unearthed at various sites in the Fukuoka region (northern Kyushu), in particular in a house for foreigners which contained a sizeable Chinese assemblage. A shard has also been discovered on Ikii Island, between Japan and Korea. These ceramics were probably shipped to Japan by Chinese or Koreans (Glover 2002: 173). In Korea, the combined forces of Silla and Tang China were victorious against Baekje forces and Japanese from Yamato, at the battle of Baekgang (663). In 668, the Silla kingdom unified the Korean peninsula, with the help of the Tang. The Silla kingdom was deeply influenced by the Chinese mode of government and adopted a Chinese form of Buddhism. The Silla kingdom stood until the early tenth century, during which time its power crumbled. Korean merchant ships were active in the northern China Sea, and many Koreans settled in Shandong.

Exchange networks included the Philippines and the Sulu archipelago: Tang pottery has been excavated on the Babuyan Islands, and on Luzon, Mindoro, Bohol, Cebu, Mindanao, and, further south, on Jolo (Bacus 2004: 266). Along the route to Palembang, where large amounts of green-glazed Chinese pottery have been recovered (see below), vessels from China probably stopped on the western coast of Kalimantan. In Vietnam, Thailand, and on the Thai–Malay peninsula, remnants of Chinese ceramics are often ten times more abundant than those of pottery from western Asia (Glover 2002).

It is generally considered that China's trade with the southern seas showed a surplus (Norel 2004: 195). That was probably the case during the first period of the empire, but the picture appears more uncertain during later periods. At the beginning of the

⁴³ Yamamura and Kamiki 1983: 335. Copper coins were issued twelve times between 708 and 958. A limited gold issue occurred during the eighth century; these gold coins were probably not used for trade.

⁴⁴ Buddhist institutions, which were often exempt from taxes, accumulated land and wealth. It was partly to escape the grip of the Buddhist clergy that the emperor moved the capital to Heian (Kyoto), in 794. During the Heian period, known as the *ritsuryō* era, the aristocratic Fujiwara clan held a prominent place at the head of a state that was less and less centralized. Power was monopolized by “the imperial house, court nobles and elite temples” (Lieberman 2009: 374). Influences from China and southern Asia did not come only through trade, as some foreigners settled in Japan: we know of a Persian physician, who arrived in 734 (Schafer 1997: 178). During the eighth century, Japan experienced a demographic decline due to epidemics, which resulted from increased contact with the continent (Lieberman 2009: 385).

eighth century, the Tang became aware of how much metal was draining away through commerce. A 713 decree stipulated that gold and iron should no longer be used in barter transactions with foreigners.

There were commercial exchanges, but also transfers of knowledge, social behavior, and religious ideas. The spread of xylography and metallurgical techniques from China to Central Asia has been noted above. In the other direction, the knowledge of windmills passed from Iran to China. Syrian artisan glassmakers arrived in China via Sogdiana.⁴⁵ The Chinese were interested in Indian medicine and sciences (astronomy and mathematics), and Indian astronomers settled in China. Improvements in hygiene are noteworthy during this period (Adshead 2004: 74). Contacts with the Sassanids and later with Muslim Persia led to the introduction of musical traditions, iconographic images (hunting scenes, for example), and the introduction of games (polo and chess) and fashions in clothing. The consumption of exotic goods was not confined to the court, or even the capital, but took place throughout the country.

The major world religions spread into the Chinese Empire. From the dawn of Islam, Muslim merchants entered China via land and maritime routes, with sea routes becoming predominant during the eighth and ninth centuries. Islam established itself in the trading ports: Canton had a mosque during the eighth century. Inter marriages between Muslim foreigners and Chinese progressively led to the formation of communities of mixed origins, the *hui*.⁴⁶ Buddhism, which arrived around the first century, continued to spread, with the support of some rulers such as Emperor Taizong and Empress Wu. “Sui and Tang China,” notes Gernet, “was the most brilliant center of Buddhism, the universal religion for most of the peoples of Asia. It was to this fact even more than to the victorious campaigns waged from Korea to Iran that China owed its widespread influence” (Gernet 2002: 277).⁴⁷ “During the Sui and Tang dynasties, there were a total of eighteen official translation bureaus established under the aegis of state support: five during the Sui and thirteen during the Tang . . . The chief translator was usually a prestigious foreign monk” (Wong 2015). Buddhism introduced new analytical concepts and “the notion of critical, self-reflective thought itself” (Adshead 1995: 71). The seventh century was the golden age for Buddhist pilgrimages to India. The journey – by land to and from India – of the monk Xuanzang (Hiuan-tsang), who sojourned in India between 629 and 644, is known to us through his biography and the *Great Tang Records on the Western Regions* written by one of his disciples, Bianji (Drège 2000: 38–40). In contrast, Yijing went to India by sea, departing from Canton aboard a “Persian” ship around 670 (as already mentioned, he stopped at Palembang; see above). Many other monks went to India during the seventh, eighth, and ninth centuries, bringing back books and relics. Buddhism also developed in China, using the language and concepts of the Daoists, for example the Chan and Pure Land sects:

⁴⁵ For the fifth century, the *Beishi* (*History of the Northern Dynasties*, 645) mentions a Yuezhi influence in the Northern Wei state in the manufacturing of colored glass (Adshead 1995: 98).

⁴⁶ An account by Liu Xu (945 CE) reveals the size of the *hui*: in 845, “under the order of Emperor Wuzong, a total of 260,500 Muslims belonging to 4,600 mosques were forced to give up their religious practices” (Deng 1997: 158 n. 2).

⁴⁷ China, writes Adshead (1995: 103), consciously used Buddhism to enhance its world role.

“Daoism served as a cultural bridge between China and India” (Bentley 1993: 80). This Buddhist expansion was accompanied by the establishment of hospitals and other institutions involved in giving assistance to the most deprived people, sometimes on the orders of the state.⁴⁸ “Buddhist monasteries in China, unlike Benedictine monasteries in the West, drew the greater part of their income not from the land, but from commercial activities such as money or grain lending, royalties from hydraulic flour mills and oil presses, and gifts” (Adshead 2004: 86). Buddhists were the source of the introduction of new commercial practices and banking techniques.⁴⁹ Coming from Iran and adopted by the Uighurs, Manicheism, a religion well “suited to be the ideology of a mercantile community,” was also present, as well as Zoroastrianism and Christianity under its Nestorian form.⁵⁰ Iranian influences have been identified both in China (in the figure of the Amitābha Buddha) and Japan (on Tang paintings and silk damasks kept in the Shōsō-in at Nara). These influences came via the oases of the Tarim or the maritime routes.

The Chinese Downturn and the Defeat of An Lushan’s Revolt (755–763)

According to the rule set forth by Tainter (1988: 194–195), the expansion of the Chinese state reached a threshold where increasing investments finally became counterproductive. Expenditure on the army, in particular, grew from 2 million strings of 1,000 coins in 713 to 14 or 15 million in 755, amounts that can be compared to the issues of coins by the Tang: 300,000 strings at the beginning of the eighth century, and only 100,000 in 834 (Elvin 1973: 147). The arrangements for conscription appear to have been ill-adapted to the new conditions, and the system of militias was in decline.⁵¹ The state then resorted to the use of mercenaries, Uighurs in particular, and the army leaders – who were often of foreign origin – acquired considerable political power, which led to the decline of the central power. Despite continued efforts, the Tang were everywhere experiencing setbacks. In Yunnan, in 750, the Nanzhao kingdom took control of the routes of the southwest. In Central Asia, helped by the Qarluq Turks who had migrated to the region around 745, the Arabs won a victory against a Chinese army

⁴⁸ Schafer 1997: 176. Adshead notes the introduction of state examinations for doctors in imperial medical colleges (2004: 83). Examinations for doctors were also used at Baghdad under the Caliph al-Muqtadir (931).

⁴⁹ “Monasticism brought essential capitalist institutions: the prototype of the permanent, non-kinship association; the specific practices of the auction; compound interest; equitable mortgage and the money club. The Buddhist monastery was a capitalist institution . . . Buddhist monasticism implanted the notion of capital itself . . . By their teaching and their own outlay, the Buddhist monasteries encouraged spending and circulation” (Adshead 1995: 57–58).

⁵⁰ Adshead 1995: 74. It was a Manichean, Li Mi, who promoted the alliance between the Uighurs and the Tang to suppress An Lushan’s rebellion.

⁵¹ For Gernet (2008: 272), the evolution can be explained both by the political circumstances and by “the relaxation of the state’s control over individuals.” Elvin points out that the militia system had a defensive character, and was inappropriate for the expansionist situation of the empire; moreover, the impoverishment of the militia members was a cause of the system’s decline (1973: 65). See also Lieberman 2009: 509.

at the battle of the Talas River in 751, putting an end to the Chinese influence in Sogdiana. Thousands of Chinese prisoners were captured, among them “silkweavers, metalworkers and paper makers,” who were sent to Kūfa and Baghdad (Boulnois 2008: 269). In the same year, the Chinese were defeated at Dali, by the Nanzhao kingdom.⁵² The Chinese troops sent to Nanzhao seem to have been affected by epidemics. In addition, northern China was under threat from the Khitan Mongols. The Korean kingdom of Silla, allied with the Tang, also experienced a period of instability and upheavals. In Mongolia, a Turkish Uighur confederation associated with the Sogdian diaspora⁵³ emerged from 744 onward; it demanded increasing quantities of silk, in exchange for horses. China, however, had begun to develop horse breeding: in 754, the pasture manager at Longyou reported to the emperor that the number of horses in his herd was over 325,700.

On the domestic side, difficulties were exacerbated by conflicts at the highest levels of the state between the aristocracy (ancient and new) and a class of officials recruited through exams, as well as by a decrease in the number of taxable families, with small landowners passing under the control of large estates as servants: here again, Elvin (1973: 67) draws a parallel with developments occurring in the Byzantine Empire during the tenth century. The growing affluence of rich landowners and merchants was accompanied by the appearance of a mass of landless peasants. Trade was affected from 755 onward by a series of revolts. The autonomy acquired by military chiefs led to a rebellion of non-Chinese generals headed by An Lushan, a man whose father was Sogdian and mother Turkish (756–763). During the turmoil at that time, in 756–757, several thousand foreign merchants, mainly Arabs and Persians, were killed at Yangzhou (Deng 1997: 152–153). The sending of a contingent of Persians and Iraqis to Gansu by al-Mansūr in 756 to support Emperor Suzong shows that diplomatic relations had been established between China and the Muslim Empire after 751.⁵⁴ The capital Chang’an was looted by the Uighurs and the Tibetans one after the other, in 762 and 763. The economic decline and the abuses by Chinese officials at Canton triggered a revolt by “Bosi and Dashi” (Persian and Arab) merchants in 758, who sacked the city before fleeing out to sea, probably to Hainan, An-nan (Hanoi), and perhaps to Java.⁵⁵

The Second Tang Period: The “Indian Summer” (763–907) and the Fall

Internal conflicts, the disaggregation of the Chinese peripheries, and the loss of control over the trade routes of Central Asia and Yunnan might have been the prelude to

⁵² The Tibeto-Burmese kingdom of Nanzhao (which was long considered a Thai state) was formed in Yunnan during the eighth century and experienced expansion during the ninth century.

⁵³ The Sogdians, who often adhered to the Manichaean religion, appear to have played an important role in Uighur society, providing the Uighur with a script. The Sogdians were employed “as ministers, diplomats and secretaries” (Bentley 1993: 96).

⁵⁴ Some of those troops probably remained in China (Adshead 2004: 161).

⁵⁵ Wang Gungwu 1998: 79, after the *Jiu Tangshu*. “It is interesting to note that in 760–761, the Ta-shih made vigorous advances to Ho-ling. This may be related to the decline in trade on the Chinese coasts, and the Ta-shih quest for a new base in the Nanhai” (Wang Gungwu 1998: 79–80).

a total collapse of the Tang Empire. The state, however, managed to overcome this mid-eighth-century crisis and adapt itself to the new conditions. “The architects of the Tang restoration were ministers, not emperors,” which is evidence of the power and vitality of the bureaucracy (Adshead 2004: 49).⁵⁶ The state thus reacted to the decrease in the number of families subjected to taxation in the countryside by implementing an innovative fiscal policy notably using indirect taxation.⁵⁷ The tax system “was no longer based on the families of the farmers, but on lands and harvests” (Gernet 2002: 263).⁵⁸ In 780, a semi-annual tax partly paid in cash replaced the earlier taxes paid in kind and in labor (Nakazato 2011).⁵⁹ Each farmer paid this tax, whether or not he owned the land he cultivated, and the upper classes did not necessarily benefit from any exemption. In addition, the government increased the taxes on commerce and instituted monopolies on salt in 759,⁶⁰ alcohol in 764, and tea in 793.⁶¹ These monopolies spurred the rise of a new class of merchants, who, however, remained under the control of the political power.⁶² Increased monetization of the economy can be observed during this period of “transition to the Mandarin Empire” (Gernet 2002: 261).

The state reduced the number of soldiers, whom it had to provide with horses. During the eighth century, Tibetan incursions and the rebellion of the general An Lushan disrupted horse breeding. Having gained a virtual monopoly on the trade in horses after the help they had provided to the Tang against the Tibetans, the Uighurs raised their prices: at the end of the eighth century, they were asking 40 pieces of silk for one horse.⁶³ The Chinese world-empire was clearly in recession during the second half of the eighth century. The Tang lost control of the Gansu corridor and

⁵⁶ These Chinese assets obviously were lacking in the Muslim system.

⁵⁷ The state thus took into account the evolution of social structures. It was clearly impossible to go back to the ancient system of allocation of land to farmers (Adshead 2004: 90; Gernet 2008: 262ff.).

⁵⁸ Now “the state no longer sought to control property and [land] occupation” (Adshead 2004: 51).

⁵⁹ Note that “systems of transferring money from one place to another, by processes of clearing, were institutionalized by the state” (Elvin 1973: 155; Norel 2005).

⁶⁰ More than half of the state revenues then came from the salt monopoly. The Tang used the technique of extracting salt through evaporation using a series of basins; this system had been developed earlier by the Northern Wei in the north, at Lake Xiezhou (Hedong). See Adshead 2004: 81. This technique was borrowed by the Muslim world through the Chinese who were taken prisoner at the battle of Talas.

⁶¹ The use of tea became widespread in China during the eighth century, and later in Inner Asia. Originating in Sichuan, tea cultivation began to spread during the Qin and the Han periods. Taxes on ores and metals were also introduced. Adshead (2004: 50) points out the importance of the establishment of fiscal policy based on indirect taxation, an innovation already initiated under the former Han by Emperor Wudi. This type of taxation was adopted by Venice and Genoa during the thirteenth century. The state perceived a specific tax on products traded.

⁶² “The state’s action in the fiscal domain resulted in favoring the rich merchants who took on the job of collecting taxes on salt” (Gernet 2008: 264). Within the context of dominance by the Confucian order, however, the merchants were not authorized to sit examinations for appointment to official positions.

⁶³ Gernet 2002: 250. A horse market was set up on the border with the steppe nomads, in the Ordos region. At the beginning of the ninth century, horses also came from Tibet. The Arabs had sent a few horses by the end of the seventh and the beginning of the eighth century. While the horses were primarily destined for the army, the most beautiful ones went to the emperor’s stables.

the Tarim basin.⁶⁴ Along the Silk Roads, the Tibetans took Dunhuang in 787, and then the oasis of Khotan; they won a decisive victory over an army composed of Chinese and Uighurs in 791 at Tingzhou. They would maintain control over the southern Silk Road until 851, the Uighurs being preeminent in the northern Tarim and in Djoungaria. Around the end of the eighth century, however, an alliance was struck between the Tang and the Abbasids against attacks by the Tibetans in Central Asia, and “an embassy of the caliph Hārūn al-Rashīd arrived at Chang’an in 798” (Gernet 1999: 250). A Tibetan–Chinese peace treaty was signed in 823 (following the Tibetan–Uighur treaty of 822). When the Kirghiz defeated the Uighurs in 840, some of the latter took refuge in China, where in 843 the Tang power massacred them.

In addition, a series of epidemics affected the coastal provinces of China from 762. Half of the population of the province of Canton died in that year, and the same overall mortality affected the Zhejiang province in 806.⁶⁵ The number of households decreased – from 12.3 to 8.9 million – between the censuses of 2 and 742 CE. These epidemics were perhaps the consequence of an increase in trade, which brought with it an intermingling of populations and the introduction of new bacteria carried via maritime routes. The upheavals in southern China during the second half of the eighth century led to a shift in trade towards Hanoi, which was, however, the victim of a Javanese raid in 767.

The first signs that China was becoming relatively closed and imposing restrictions on commerce can be observed at this time. In 779, it was forbidden for the Uighurs to wear Chinese clothes. In 780, the Tang government prohibited the use “of silver, copper, iron, male and female slaves” in trade with foreigners. Five years later, an edict forbade all travelers from taking “even one piece of cash” to western regions such as Tibet and Nanzhao (Wicks 1992: 24).⁶⁶ In 809, another edict prohibited the transportation of money beyond the Lingnan Mountains in southern China (north of Canton).

At the beginning of the ninth century, however, China’s situation improved. The Hanoi region was ravaged by wars and Canton regained its former activity and opulence.⁶⁷ At peace with the Tibetans and the Mongols, from 820 to 860, the Tang Empire experienced an “Indian summer” (Adshead 2004: 51), the significance of which should, however, be put into perspective. The loss of the Silk Roads and evolving

⁶⁴ The Tibetans had already controlled a large part of the Tarim between 670 and 692. Moreover, Yunnan was paying tribute to the Tibetans by the middle of the eighth century. Trisong Detsen’s reign (755–804) in Tibet saw an expansion of Buddhism.

⁶⁵ McNeill 1998b: 148. The first description of the plague in China dates from 610. An epidemic was recorded in Canton province in 642.

⁶⁶ An independent kingdom, Nanzhao maintained tributary relations with China. It acted as a commercial intermediary between Burma and China. In Nanzhao, trade was conducted with silk and cowries (*Xintangshu*). Gang Deng (1997: 171–172) emphasizes the growing shortage of money in the Tang Empire during the eighth and more importantly during the ninth century (whence the increasing use of silk as currency). Chinese “copper” coins were made of an alloy containing 70 percent copper and 30 percent lead.

⁶⁷ Wang Gungwu 1998: 83. The kingdom of Nanzhao (Yunnan) took the Red River valley and Hanoi in 827. Trade again prospered in Canton between 837 and 841: for this period, the *Xintangshu* writes that port officials continued to profit from trade in the southern seas, selling “at low prices the valuables they had acquired,” as “gifts” or “goods in excess of the customs dues” (Wicks 1992: 24). Moreover, officials invested in trade indirectly.

Chinese production and trade induced a more maritime and southerly orientation of the empire. “The Chinese world’s center of gravity was tending to move from the Wei valley and the central plain . . . towards the plains of the lower Yangtze basin” (Gernet 2002: 265). Whereas 75 percent of the Chinese population lived in the north during the early Tang period, that percentage dropped to 50 percent at the end of the dynasty. For Adshead, “the colonization of [southern territories] was China’s equivalent to the discovery of America . . . [It] was a prime motor of economic growth between 500 and 1000” (2004: 75, 77). In addition to more intensive rice cultivation, one observes crop diversification with the development of tea plantations in the Anhui, Zhejiang, Fujian, and Sichuan provinces,⁶⁸ of sugarcane cultivation, as well as the introduction of the cotton plant from India into the delta of the Pearl River (the sugar industry also originated in India). Domestic commerce developed, as did foreign trade through the major ports. The Lingqu canal connecting the Xiang River (which flows north into the Yangtze) and the Li River (which flows south into the Gui River and the Pearl River) was fitted with thirty-six flash locks by 825. The state permitted greater freedom of trade and entrepreneurship. An early ninth-century poet describes the opulence of a successful business trader in these terms: “Wherever profit is to be made he goes . . . His food and drink are sweet and well spiced. With interest and capital constantly breeding rich profit . . . He frequents noblemen’s houses, the residences of royal princesses . . . Knowing that his riches make him powerful as a prince” (Goucher *et al.* 1998). Rich merchants controlled traffic between the Yangtze basin and northern China, the waterways allowing the transport of grain, salt, tea, wood, textiles, and other products. This second period of the Tang dynasty thus witnessed the emergence of a substantial Chinese private enterprise for the first time in China’s history.⁶⁹

“The shortage of means of payment at a time when commercial transactions were developing rapidly” encouraged innovations in the field of credit (Gernet 2002: 265). The various provinces obtained the right to issue currency. The Tang reduced both the copper content and the weight of their bronze coins, in order to cope with the copper shortage and price increases. The state issued iron and lead coins. More importantly, one notes the appearance of new commercial techniques, using negotiable certificates of deposit (the forerunner of the bank note), issued to merchants by the representatives of their provincial administrations in the capital.⁷⁰ The first bills of exchange appeared during the years 806–820: tea traders who sold their cargoes in the capital received credit notes (“flying cash”) in exchange, “which enabled them, when they returned to their provinces, to receive payment in currency after deduction of the taxes levied in the capital” (Gernet 2002: 265). Certificates were then issued for the transfer of local taxes to the capital. In addition, bills of exchange entitled the bearer to receive merchandise such as tea and salt in another place (Elvin 1973: 155ff.).

⁶⁸ As already mentioned, recent excavations in Chang’an and western Tibet show that tea was already being cultivated in China and carried to Central Asia by 200 CE (Houyuan *et al.* 2016).

⁶⁹ A significant private sector had been in place earlier, but it was in the hands of foreign traders (Adshead 2004: 91).

⁷⁰ At the end of the ninth century, the rich merchants and financiers of Chengdu, in Sichuan, also issued (privately) “negotiable certificates of deposit, which were the ancestors of banknotes” (Gernet 2002: 265). Schafer (1997: 15) indicates the appearance of bills of exchange as early as the eighth century.

Difficulties resurfaced around the middle of the ninth century, however. China experienced significant droughts at that time, accompanied by an increase in market prices and social disorder. The internal political situation deteriorated. Within the context of a nationalist backlash against foreign influences, and also for economic reasons,⁷¹ between 843 and 845, Emperor Wuzong prohibited Buddhism and religions from western Asia (Mazdeism,⁷² Manicheism, Nestorianism,⁷³ and Islam), which led to a decline in trade with foreign countries, particularly along the Silk Roads. Although the proscription lasted only a few years, Buddhism fell into decline in China. The state confiscated the property of the monasteries, and Buddhist hospitals were managed under the oversight of public administrators; “the Buddhist church held most of the empire’s stock of precious metals in the form of objects of piety, bells, and statues, and one of the measures adopted was to melt down bells and statues into coins” (Gernet 2002: 294). The emperor’s decision followed attacks against Buddhism that were not really new, but now found a strong echo among the ruling class. The reasons were at the same time economic (lands owned by the Buddhist institutions were exempt from all taxes and corvées, and those institutions had accumulated much wealth), ideological (Buddhism was accused of undermining the core values of Chinese society, such as the family, and it “decentered China,” by making India the seat of knowledge), and political (Buddhism formed an independent power) (Abramson 2007).⁷⁴ These measures were implemented within the context of a “culturalist” movement marked by a Neo-Confucianism that had emerged during the eighth century, with the figures of scholars such as Han Yu (768–824) and Li Ao (772–836). This Neo-Confucianism would further develop later on, during the Song period.

China became more inward looking. Only eight embassies from Southeast Asia are recorded for the ninth century, and most of them arrived during the first half of the century. They came from Zhenla (Chen-la) in 813, Heling in 813, 815, and 818, Shepo (Java) in 820 and 831, Zhanbei (Chan-pei) (Jambi, Sumatra) in 852 and 871, and Zhancheng (Chan-ch’eng) in 877. Following economic difficulties and famines in northern China, peasant uprisings broke out, and in 879, the troops of the rebel chief

⁷¹ The Uighurs, who often practiced moneylending, thus became scapegoats at this time of recession and rising prices. Moreover, the huge wealth accumulated by the religious institutions incited covetousness on the part of the authorities.

⁷² Mazdeism (Zoroastrianism) was dominant in Sogdiana, although the *Suishu* describes the Sogdians as Buddhists. Sogdiana played a major role in trade and cultural exchanges via Central Asia. In addition to Zoroastrianism, it contributed to the spread of Manicheism toward the east.

⁷³ According to the stela of Xianfu, erected in 781 near Chang’an, written in Chinese with a few lines in the Syriac alphabet, Nestorianism arrived in China in 635. The text may have been written “by a learned Persian monk named Adam, who knew Sanskrit and helped an Indian Buddhist monk to translate Sanskrit Buddhist texts into Chinese; he was well versed in Buddhism, Daoism and Confucian philosophy” (Boulnois 2008: 278). The Nestorian presence in China is probably older: Nestorians founded archdioceses at Merv, Herat, and Samarkand as early as the Sassanid period. Many Chinese Christians came from Sogdiana; this region was home to a large Nestorian community until the fifteenth century. A Christian church dated to the seventh century has recently been discovered outside Chang’an (Adshad 2004: 157). The Nestorians exercised some influence at the Tang court.

⁷⁴ In Japan, “the great monasteries of Nara in the eighth century were so powerful that Emperor Kammu decided to move the capital in 784, and finally settled in Heiankyo (Kyoto) in 794; the move was to gain the court’s independence from the stranglehold these monasteries had on state affairs” (Wong 2015).

Huang Chao – who had come from the Yellow River valley – massacred the foreigners at Canton.⁷⁵ According to the historian Abū Zayd, from Sirāf, 120,000 Muslims, Christians, Jews, and “Iranians following the old faith” [Zoroastrians] were slaughtered. While that number is probably exaggerated, it reflects the large size of the foreign communities in the great Chinese trade centers.⁷⁶ The multiplication of military districts led to political disintegration that worked in favor of governors who behaved as independent potentates. The central power lost control of the provinces, and uprisings continued until the end of the Tang dynasty in 906. There were as many as “15 short-lived kingdoms between final Tang collapse and imperial reconsolidation under the Song” (Lieberman 2009: 500). The second half of the ninth century was a period of climate change marked by colder and more arid conditions in China (between *c.* 850 and 940; Zhang *et al.* 2008), which certainly had an impact on yields from cultivation and aggravated economic and political problems. Chinese trade with foreign countries declined during this period as well as during the early tenth century (at the same time, between 869 and 883, southern Mesopotamia was devastated by “the Zanj revolt,” followed by violent social upheavals inspired by the Shiites). On the Thai–Malay peninsula, for example, “the tenth century appears as a period of low import levels of Chinese ceramics” (Jacq-Hergoualc’h 1998: 294).⁷⁷ At the same time, Japan was experiencing an economic decline marked by significant demonetization and falling trade. Fear of foreign contacts led Heian to “cancel its mission to China in 894 and to rebuff tenth-century requests from China, Korea, and Manchuria to resume relations” (Lieberman 2009: 397). In Korea, the Silla kingdom disintegrated during the early tenth century. However, the Goryeo kingdom united the majority of the peninsula around 936.

The second period of the Tang dynasty was part of an overall recession in the world-system, but developments were taking place alongside the Chinese decline that heralded the times ahead. Geographic and social transformations as well as the innovations introduced clearly served to underpin the future advances of the Song period. In the provinces of Guangdong and Fujian, the independent kingdoms of Nan Han and Min developed agriculture and commerce, providing the basis for those regions’ prosperity during the Song dynasty.⁷⁸ The tomb of Liu Ha, niece of the first king of Nan Han and wife of the third ruler of Min, contained Persian ware, attesting to trade with the Persian Gulf via Canton and Fuzhou (Salmon 2004: 41).

⁷⁵ The rebels occupied Luoyang in 880 and seized Chang’an in 881. The misfortunes of Canton benefited other harbors such as Quanzhou.

⁷⁶ According to Mas’ūdī, “the victims who fell under the sword of the rebels were innumerable, and the number of Muslims, Christians and Jews alone who were killed or drowned for fear of the sword amounted to 200,000” (Mas’ūdī, para. 329–332). See also Gang Deng 1997: 153, according to Sima Guang (1084). The size and wealth of these foreign communities partially explains the violence of the xenophobic reaction.

⁷⁷ For continental Southeast Asia, Lieberman (2003: 225) notes a more arid climate between 860 and 950, and a wetter phase between 950 and 1280.

⁷⁸ Wang Gungwu 1990: 402. During the tenth century, one again sees a plurality of currencies, and a “sectoralization of the monetary circulation” corresponding to a fragmentation of political power (Thierry 2001: 137). The Northern Song would resume a sizeable minting of bronze coins.

China and the Indian Ocean: Evidence from Arabo-Persian Texts

During the Tang period, Chinese ships rarely ventured into the Indian Ocean, and certainly did not venture beyond the Malabar coast in India, despite advances in maritime technology since the Han dynasty, for example in sails⁷⁹ and in locating the position of vessels.⁸⁰ Trade with Muslim and Austronesian merchants, however, took on crucial importance for the Chinese economy, and through these merchants, the Chinese gained knowledge of the distant countries of the Indian Ocean. The first mentions of the African continent in Chinese texts were linked to the presence of black slaves in China in the seventh and eighth centuries. While the Persians and the Arabs were certainly prominent in the slave trade to the Orient, Sumatran and Javanese people and ships also played a role in that trade. It is possible that the tall black “*Kunlun*” slaves who were already present at the Chinese court during the fourth century were Africans.⁸¹ Various terracotta figurines dated to the Tang period appear to feature Africans.⁸² We know that between the eighth and thirteenth centuries, Sriwijaya [Zabaj, or Zabag, for the Arab geographers] controlled the trade routes between the Indian Ocean and China. Chinese sources have recorded offerings of *sengki* (*seng-k’i*) (*zangi*) or *sengzhi* (*seng-tche*, *seng-chih*) (*zanji*) slaves to the Chinese court by the kingdom of Shilifoshi (Palembang, kingdom of Sriwijaya) in 724.⁸³ As early as 614, “Java” sent two *sengzhi* women to China, and in 813, an embassy from the kingdom of Heling presented four slaves of the same name to the Chinese court. In his dictionary, *Yiqie jing yinyi*, compiled around 817, the Buddhist monk Huilin includes the *sengki* [Zanj] in the Kunlun category. “The text attributes negative qualities to dark-skinned people” (Pelliot 1925: 262; Wilensky 2002: 7–8). According to D. Lombard, “[this] allows us to state that at least some of the Zeng slaves acquired on the African coasts were carried to Java, and that some of them were even sent to China.”⁸⁴ One is tempted to link the mention of Zanj slaves in Java to the account of the attack by Waqwaq people (Indonesians) on Pemba during the tenth century: the

⁷⁹ Gang Deng – probably wrongly – states that the journeys of the Chinese monks to India relied “entirely on Chinese ships” (1997: 15). Sails were used from ancient times by non-Chinese maritime populations. According to Deng, the Chinese word *fān* (“sail”), however, only appears in dictionaries during the period of the Eastern Han (1997: 33), but J. Needham (1971: 599) claims that this sign goes back to the second millennium BCE; it would represent a double mast with a four-pointed sail that is found today only in the Melanesian area.

⁸⁰ “Instruments estimating the latitude of ships’ positions by measuring elevation and bearing between the horizon and the Polaris or other stars at a given time” were invented during the Tang period (a star-measuring ruler has been recovered from a shipwreck dating to the Song period in 1974 at Quanzhou) (Deng 1997: 37).

⁸¹ Wang Gungwu 1998: 45; Miller 1998: 185. However, we cannot exclude the sending of Papuans from eastern Indonesia (see below).

⁸² See the figure of a boy from the British Museum (Illustration 1v), and the figure of a male dancer from the Metropolitan Museum, New York (ref. 1981.470.1).

⁸³ Ferrand 1919 (March–April): 330–331. See also Yang shao-yun, not dated. For the two spellings *senggi*/*sengzhi*, see Pelliot 1904: 290–291. See also Mahdi 2008: n. 17. *Zanggi* or *janggī* in Malay is also pronounced *jenggī*, found in an inscription in Java (860) (Mahdi 2008: n. 17).

⁸⁴ Lombard 1990, 11: 30, based on the *Xintangshu*. The embassies from Heling in 815 and 818 also brought five *sengzhi* boys and two *sengzhi* women, respectively.

Indonesian states perhaps went to fetch slaves and other products on the East African coast. It cannot be totally excluded, however, that some of the *sengzhi/sengki* slaves were “black people” from the Pacific Ocean, the Papuans also being named *jenggi* by the Malay/Javanese world (Derideaux 2002–2005b).

Buddhist monks were an important source of knowledge on the Indian Ocean. The monk Huichao, of Korean origin, who went to India via a maritime route during the first half of the eighth century, writes in his “Memoir of the Pilgrimage to the Five Regions of India” that “the journeys from the Western Sea to the Southern Seas often aim to acquire precious merchandise from Ceylon and Kunlun gold.” The name Kunlun usually refers to Southeast Asia and the dark skin of its inhabitants,⁸⁵ but some authors have argued that in this passage Huichao may have been referring to East Africa and gold from the Sofala coast.

The Chinese chronicles do not mention direct relations between China and Africa under the Tang during the ninth and tenth centuries, except the “accidental” journey of Du Huan,⁸⁶ but they reveal the existence of a sizeable maritime trade. Various African products were known in China as products from the country of the black Zanj: ivory, rhinoceros horn, myrrh, incense, and ambergris, which Duan Chengshi (ninth century) mentions with its Arabic name *‘anbar*, transcribed *ā-muāt* (it means that ambergris was brought by Persians or Arabs) (Wheatley 1975: 104–105). The Chinese also knew ambergris under the name “dragon’s spit.” The search for ambergris in the Indian Ocean was probably stimulated by the Chinese demand (Fauvelle-Aymar 2013: 43). Later sources mention gold (perhaps from Zimbabwe). Moreover, the oldest Chinese coins found on the eastern African coast are dated to 620.

A passage in Mas‘ūdī raises the possibility of ancient Chinese navigation to India and the Persian Gulf. Writing of Kalāh, located on the Thai–Malay peninsula, Mas‘ūdī notes:

At this place, Muslim ships of the Sīrāfis and ‘Umānis stop at the present time [before 947], and meet the ships that have come from China. But in earlier days, it was otherwise: the ships of China (*marākib al-ṣīn*) used to come to the land of ‘Umān and Sīrāf and the coast of Persia and the coast of al-Baḥrayn and al-Ubullah and al-Baṣra, and conversely ships used to go from the places mentioned to China. (Mas‘ūdī, para. 336, 1962: 127)

Arab and – more importantly – Persian ships had been sailing to China from the second half of the seventh century (and probably earlier). It is understandable that after the massacre of all the foreign merchants at Canton by rebel forces in revolt against the Tang dynasty, in 879, Persian and Arab vessels preferred to stop at Kalāh, a port which benefited from the rise of Śrīwijaya. The Chinese chronicles do not mention any navigation of junks toward the Persian Gulf or Arabia in ancient times

⁸⁵ According to the *Jiu Tangshu*, “the people living to the south of Linyi have curly hair and black bodies and are commonly called *kunlun*” (Wilensky 2002: 6).

⁸⁶ Taken prisoner by the Arabs at the battle of the Talas River, Du Huan later embarked on a journey in the Red Sea; this sea has been identified through the countries of Molin (the Erythrean coast) and Laobosa (Al-Habasha, Ethiopia). See Smidt 2001 and below. Wilensky (2002) claims that Molin refers to Malindi, but this is unlikely.

(however, as pointed out above, Gang Deng states that Chinese ships reached Sri Lanka and later sailed beyond that island as early as the Han period). Pelliot (1928), echoed by Needham (1954), has also claimed that Chinese who had been taken prisoner at the battle of the Talas River returned to China aboard “Chinese junks” in 762. Jiadan’s writings, compiled between 785 and 805, describe the route from Canton to Baghdad via the Malabar coast and the port of Quilon, but Jiadan does not give the “nationality” of the ships plying this route.⁸⁷ Hourani claims that there is no evidence to support Chinese navigation to India and beyond, at least until the late twelfth century.⁸⁸ Conversely, Boulnois, based on the writings of Cosmas, thinks that “in the middle of the sixth century, Chinese boats came regularly and in large numbers to trade in the main port of the island” of Sri Lanka (Boulnois 2008: 250; see above). One might ask whether these “Chinese ships” that sailed to the western Indian Ocean well before Mas’ūdi’s time, were not in fact Indonesian ships, but then we would expect to find some mention of Zabag or Kalāh.⁸⁹ Or should we consider those ships as “Chinese” because they sailed to and from China? Balāḍurī and Dīnawarī (whose works Mas’ūdi may have consulted), however, also speak of “Chinese ships” at al-Ubullah, a port dating to the Sassanid period: they mention a letter from the Commander ‘Utba ibn Ghazwān to the Caliph ‘Umar mentioning the capture of Ubullah, “port of the seagoing vessels from ‘Umān, Bahrein, Persia, India and China.”⁹⁰ “We will have to recognize,” writes Sauvaget, “that the Chinese introduced the Arabs to navigation towards eastern Asia; it was aboard their junks that the merchants from the Persian Gulf first sailed to the southern seas.” In 762, Du Huan “was brought home by a junk from the Persian Gulf.”⁹¹ We should recall that Chinese stoneware jars, perhaps dated to the fifth century, have been discovered at Sirāf and Suhar,⁹² although the carriers are not known. These data are in line with the *Account of China and India*, *Akhbār al-Sīn w-al Hind* (written in 851).⁹³

As for the places which they reach they relate that most of the Chinese boats are loaded at Sirāf and that the goods are shipped to Sirāf from al-Basra, ‘Umān, and other ports . . . To the eastern side of this sea between Sirāf and Muscat, . . . in this sea are the mountains of ‘Umān and around

⁸⁷ According to various authors, however, they were indeed Chinese ships. See for example Lewicki 1936: 173–174, quoted by Hamidullah 1974: 196.

⁸⁸ Hourani 1951: 66, 76. According to Tampoe (1989: 120), too, clear evidence of long-distance Chinese navigation only exists from the Song period onward. Manguin writes (1993: 269): “until the last centuries of the 1st millennium AD, [Chinese] skills were applied to build only riverine and coastal vessels . . . It was therefore only after the establishment of the Song dynasty in the 10th century . . . that the large oceangoing ‘junks’ later witnessed by travelers began to be built on any remarkable scale.” Ray (1999b: 12) also rejects the idea of Chinese ships in the Persian Gulf at this early date.

⁸⁹ Labib (1974: 228) adopts this point of view: “It is an established fact that long before Islam, and before Srīwijaya, ships of the Maharajah of Kalah had sailed to the Persian Gulf and the Sassanid ports.”

⁹⁰ Sauvaget 1948: xxxix. Also Hamidullah 1974: 196. J. Needham (1970: 140) also claims that Chinese ships reached Sri Lanka during the fourth century and the mouth of the Euphrates during the fifth century.

⁹¹ Sauvaget 1948: xxxix. See also Drège 2000: 53 and Smidt 2001.

⁹² But this dating remains controversial (see Volume 1).

⁹³ The author of the *Account of China and India* remains unknown. Ferrand has wrongly attributed the text to a merchant, Sulaymān, whose name is mentioned in the text.

them is situated the spot called ad-Durdūr. It is a narrow passage between two mountains which the small boats cross, but the Chinese boats do not cross it . . .

Then from there [Muscat], the boats set sail for India, destined for Kūlam Malay. The journey from Muscat to Kūlam Malay, with moderate winds, is of one month. At Kūlam Malay . . . taxes are collected from the Chinese boats . . . From the Chinese boats one thousand dirhams are collected, and from the other boats, [the collection is] between ten and twenty dinars.⁹⁴

Here again, should we understand “Chinese ships” as meaning ships that sailed to and from China? Chinese coins dated to the late ninth century, however, have been recovered at Persian Gulf ports such as Sīrāf, and a coin of the emperor Taizong dated c. 990–994 has been excavated in the Maldives (Mikkelsen 2000: 21).

Gang Deng states that ships of the *fuzhou* type (usually called “junks”) may have appeared in the late Tang period. The oldest mention of this vessel, however, dates back to the Song period (Deng 1997: 27; see below).

The Advent of the Northern Song

After the demise of the Tang dynasty, while northern China was ravaged by wars, Sichuan, the Yangtze basin, and the southern maritime provinces experienced a period of prosperity partly founded on trade, which the state tried to promote. The Min kingdom, in Fujian, developed silk and ceramics exports, and Canton enjoyed growth during the tenth century. It would therefore be incorrect to suppose that the fifty years of political disaggregation experienced by China during the tenth century were a totally negative period. In fact, it appears to have been creative in institutional terms, as “intermediary periods” often are (Adshead 1995: 110).

In 951, the short-lived dynasty of the Later Zhou unified northern China. It rehabilitated canals and dikes, and in 955 confiscated the property of the Buddhist monasteries, whose copper statues were melted. The recovery effort accomplished by the Zhou would be of great help to the government of the Song dynasty, founded at Kaifeng by a general brought to power by his troops in 960.⁹⁵ An era of radical transformations and major expansion then began for China, in all areas (Gernet 2002: 303ff.).

The period between the sixth and tenth centuries can be viewed as a new phase of integration of the various regions of China, marked by the increasing significance of the Yangtze basin, with Korea and some regions of Japan now forming semi-peripheries. China was more strongly connected than previously with Southeast Asia, India, and western Asia, via the terrestrial and maritime “Silk Roads,” during the phase of growth of the world-system. This rise of eastern Asia was inseparable from

⁹⁴ Paragraphs 13 and 14 of the *Account of China and India*, Maqbul Ahmad 1989: 38 and Sauvaget 1948. From Kūlam, the boats set sail to the Sea of Harkand (Bay of Bengal) and Langabālūs. Sauvaget believes that the toponym Langabālūs transcribes the Chinese Lang-p’o-lou-sseu, which refers to the western part of Sumatra, but it is more likely that the Chinese derives from the Arabic (cf. the Barusai Islands of Ptolemy, sometimes considered as being the islands situated on the west coast of Sumatra).

⁹⁵ “It is not simply a matter of a change of scale . . . but of a change of character” (Gernet 2002: 300).

crucial developments in western Asia and the Mediterranean. The formation of an extensive empire linking the Mediterranean and the Indian Ocean through the two corridors of the Persian Gulf and the Red Sea represented another driving force of the world-system. This empire was founded not only on the desire for power of an elite, but also on the adherence of various populations to the same ideology, based on Islam.

2 Islam: The Conquest of Lands and Oceans

And of His signs is that He sends the winds as bringers of good tidings and to let you taste His mercy and so the ships may sail at His command and so you may seek of His bounty, and perhaps you will be grateful.
(Koran 30, 46)

We have the Tigris to put us in touch with lands as far as China, and bring us all that these yield as well as the foods of Mesopotamia and Armenia.
(the caliph al-Mansūr, at the founding of Baghdad in 732: Adshead 1995: 78)

From Muhammad to the Umayyads and the Abbasids: Formation of an Empire

During the Sassanid period, the economic and political role of the Southern Arabs was limited. While the Muslim expansion would be conducted by Arabs from the northern interior, many Yemenis were also involved in this conquest. The emergence of Islam occurred during a phase of increased aridity in Hijāz and South Arabia,¹ and following a decline in trade during the sixth century.² The beginning of the eighth century, however, saw a period of renewed economic activity in the world-system.

A native of the merchant city of Mecca, the center of a pre-Islamic pagan cult,³ the Prophet Muhammad was the source of a new monotheism, Islam (meaning “submission [to God]”). Its holy book, the Koran, is for its believers the result of revelations received by Muhammad from 610 onward. The Makkans’ opposition to this new doctrine led the Prophet to leave the city and travel to Medina. This move (known

¹ N. Brown 2001: 108, 111, 273. As already noted, the late sixth and early seventh centuries experienced relatively milder conditions marked by higher precipitation in the Indian Ocean and the China Sea (see above). Adshead (2004: 96) wrongly claims that “early Islamdom was favored by the cooler and wetter natural environment.”

² On this point, P. Crone (1987: 83) may be correct when she states that the Quraysh tribe “did not trade in incense, spices or other foreign luxury goods” during the sixth century. Precious metals were indeed exported (see below). In addition, al-Qummī (tenth century) mentions the transport of pepper by the Qurayshites.

³ Crone (1987: 168ff.) rejects the idea that Mecca played a significant role in long-distance trade; she also denies the existence of a fair and the idea that Mecca may have been a place of pilgrimage during the pre-Islamic period. She notes that Mecca does not appear on the list of *haram* sanctuaries to visit; these sanctuaries were where fairs were held, but the reliability of these lists has been called into question. It has been suggested that Mecca is the “Macoraba” mentioned by Ptolemy. Moreover, Marinus of Tyre (second century CE) specifies that the Arabs “adored a quadrangular stone” (*Dissertations*, viii). The Ka’aba is a cuboid building, containing a black stone, already venerated in pre-Islamic times.

as *hejira*) marked the beginning of the Islamic era (622). Muhammad then managed to unite the Arabs toward a common goal. On a political level, this process of Arab unification was also a reaction to Persian intrusion into and control over trade routes.

After Muhammad's death in 632, his father-in-law Abū Bakr, who became the first caliph (successor), succeeded in uniting the Arab tribes both politically and religiously. Under the second and third caliphs, 'Umar and 'Uthmān, Arab warlike values were now channelled outward, and the new faith launched the Islamic armies toward the conquest of Syria and Palestine (636), the Persian Empire (633–650), and Egypt and Cyrenaica (642–643). These conquests were facilitated by the weakening of the Byzantine⁴ and Persian empires at this time, due not only to constant wars, but also to drought,⁵ famine, and epidemics. In Central Asia, Herat and Merv were seized in 650, and Balkh in 652. In 674, the last Sassanid emperor, Peroz, fled to China with his government. The Arabs, however, failed to take Byzantium (670–677). Against the Arab fleet, the Byzantines used "Greek fire," based on a "probable mixture of bitumen, sulphur and pitch" (Jacomy 1990: 52–53). For Partington, the basis of the earliest Greek fire was distilled petroleum, mixed with a resinous substance and sulphur (1999: 31, 69).⁶ It has been suggested that the "Greek fire" was the result of a technological transfer by a Syrian architect called Kallinikos, who traveled to Byzantium in 673 (Needham *et al.* 1987: 77; Hobson 2004: 188), but Partington (1999: 13) dismisses this story as legend. In 655, however, an Arab fleet, built by Copts from Egypt and Greeks from Syria, won a victory off the coast of Lycia (Hourani *et al.* 1995: 56).

On the sea, the Arabs also faced strong Sassanid resistance, which may explain the hostility of the caliph 'Umar to maritime enterprises. The port of Baṣra, however, was founded in 638. In addition, the Omanis were active in long-distance trade; they brought Indian teak into Arabia, used in Hijāz during the mid-eighth century (Sauvaget 1948: xxxix).

Islam's unity was short-lived. By the time of 'Uthmān's death, an armed conflict had broken out between the partisans of the caliph 'Alī, Muhammad's son-in-law, and the Makkans, who were backed by Abū Bakr's daughter.⁷ After 'Alī's assassination, Mu'āwiya, governor of Syria, became caliph, founding the dynasty of the Umayyads (661–750), who transferred the capital of the Muslim state from Medina to Damascus in 661. When 'Alī died, his son Ḥusayn made an attempt to take over the caliphate, but perished at the battle of Kerbala (680), thus sealing the division between the Sunnis and the Shiites (whose name derives from *s'iat*, "to take the side" [of 'Alī]).⁸ Arab expansion resumed under the Umayyads, with the conquest of northern Africa (Kairouan was founded in 670),⁹ Spain

⁴ Egypt was in turmoil following the death of the Byzantine emperor Heraclius in 641. The Monophysite Christians from Egypt, Palestine, and Syria appear to have welcomed the arrival of the Muslims. Egypt was partially conquered, and at last ceded by treaty.

⁵ After 629, disastrous Tigris floods damaged the irrigation system in Lower Mesopotamia.

⁶ The Greeks assembled a "fleet of fire-ships equipped with siphons," which burnt the Arab boats, in 668 and 715 (Partington 1999: 12). "Greek ships were fitted with siphons before Greek fire was invented, according to Theophanes [*c.* 758–817]" (Partington 1999: 28).

⁷ 'A'icha, the Prophet's wife after Khadija's death (Khadija was the mother of Fatima, 'Alī's wife).

⁸ Kerbala became a holy site for the Shiites, a place of pilgrimage to Ḥusayn's tomb. Ḥusayn's death is commemorated on the day of *al-'Ashūrā*.

⁹ Northern Africa was entirely subjected only in 702, after fierce Berber resistance.

(711–718), and Narbonnais (719). The Arab defeat at Covadonga (Asturias), however, put a stop to the Muslim advance into the northern Iberian peninsula. In addition, an Arab army entering the Frankish territory was vanquished at Poitiers in 732. In Central Asia, the Arabs took Sogdiana (Bukhara, Samarkand) in 710,¹⁰ and Khwarezm (Khawārazm) in 712,¹¹ despite opposition by the Turks. Armenia was conquered in 713. Under the Umayyads, the Muslim Empire reached its greatest extension, from the borders of China to the Atlantic Ocean. In 717–718, however, the Muslims failed once again to seize Byzantium. Moreover, Islamization of the territories was very limited, even though an edict from ‘Umar II in 718, providing tax relief for new converts, did stimulate adherence to Islam, especially in Egypt.

The Umayyads fostered a process of urbanization, using mostly Syrians – converted or not – for their administration. They borrowed the Byzantine bimetallic monetary system (the issuance of gold coins called *solidus* greatly outnumbered that of silver coins, called *miliaresion* at Byzantium) as well as the Persian system (where the silver coin, the *drahm*, was preeminent), keeping the name of the ancient coins (dinar, dirham).¹² This bimetallic currency made trade possible in all regions of the Islamic countries and exerted a unifying action on the empire.¹³ This money was imitated by monetary workshops in Christian Europe, which issued counterfeit dinars (Simonnot 2002: 98). The first issuance occurred under Abd al-Malik (685–705), who also reformed the administration, and arabicized it. The translation into Arabic of the basic scientific texts used by the officials of the *diwān* dealing with the empire’s income would have extraordinary consequences (these texts were written in Persian in Mesopotamia, and in Greek in Syria): threatened in their monopoly over knowledge, Persian and Greek speakers, competing with other scholars, sought books dealing with Greek and Indian sciences which might help consolidate their position in the imperial bureaucracy, and became fully involved in the translation of these works (Saliba 2007: 58ff.).¹⁴ Khālid bin Yazīd, who advised Abd-al-Malik to issue his own money, may have been one of these early translators.

Conflicts between Shias and Sunnis, disputes among Arab tribes, the discontent of conquered populations over taxes levied on them and the political privileges enjoyed by the Arabs, however, eroded the Umayyad leadership. A Coptic uprising exploded in Egypt in 725. A riot led to the caliph al-Walīd’s death at Damascus in 744. Organized in Khorasan, and started in Merv, a revolt finally brought Abū al-‘Abbās to power: he was

¹⁰ In contrast, east of Khorasan, the Muslims faced stronger resistance from the Buddhist and later Hindu Shāhī from Kabul: Afghanistan was not conquered until the tenth century. The Ghaznavid expansion would later put an end to the Shāhī dynasty. The horseman-and-bull coins of the Shāhī would later provide a model for various dynasties in northern India until the thirteenth century.

¹¹ When Khwarezm was conquered by the Muslims, Jews fled from this region to Khazaria (Boulnois 2008: 205). The Muslim ruler imposed an annual tax on silk and slaves on the Sogdians.

¹² Dirham derives from the ancient Greek *drakhme*.

¹³ The Byzantine system was in fact trimetallic: gold, silver, and copper. The bimetallic system was not a Muslim innovation, as P. Norel writes (2004: 126–127). It is true, however, that as a means of exchange, gold held more importance at Byzantium and silver in Iran, where gold was primarily hoarded. Outside the Muslim world, some regions favored gold, and others silver; a truly bimetallic system therefore held distinct advantages.

¹⁴ Here, G. Saliba relies primarily on a book by al-Nadīm (c. 987/988).

a descendant of the Prophet's uncle, 'Abbās. Abū al-'Abbās was proclaimed caliph at Kūfa in 749, founding the Abbasid dynasty. In the aftermath of an Abbasid victory at Zab (750), the Umayyads were massacred; however, one remaining Umayyad, Abd al-Raḥmān, managed to flee and reach Spain where he took power at Córdoba in 756, founding an Umayyad emirate (756–1030) to which a large part of the Iberian peninsula submitted. The nature of the caliphate changed; Iranian¹⁵ traditions deeply influenced the evolution of the state, and the Turks would play an increasing role over the ensuing centuries (Elisséeff 1977: 124).

Advances in Agriculture, Industry and Knowledge, and Expansion of Trade: The Abbasid “Golden Age” (750–850)

The golden age of Islam, which saw the ascent of a brilliant urban civilization in various regions of the empire, can probably be dated to the eighth and early ninth centuries, under the Abbasid caliphs Abū Ja'far al-Mansūr (754–775), al-Mahdi (775–785), Hārūn ar-Rachīd (786–809), and al-Ma'mūn (813–833). A new capital was founded at Baghdad in 763;¹⁶ in forty years, it became the largest city in the world, along with Chang'an, with a population reaching over one million.¹⁷ Uniting temporal and spiritual powers, the Abbasid caliphs relied upon an administration in which Iranians were preeminent. The position of vizier was created: previously the vizier was an “adviser” to the ruler (Goitein 1966). This position was held by the Barmecids – a family of Bactrian and Buddhist origin – until 803. In the new pluriethnic society, the Arabs no longer had a privileged status, and the authorities generally showed tolerance in matters of religion.¹⁸ The transfer of the capital from Damascus to Baghdad reveals the new significance of land and sea trade in the Persian Gulf, Iran, and the rest of Asia. In 751, the victory of the Muslim armies over the Chinese at Talas allowed the caliphate to enhance its presence in Inner Asia. Reportedly, the Arabs made silk weavers and paper workers prisoners. According to Du Huan, who was able to travel back to China and write his life story, “Chinese artisans and artists taught the Arabs, at Kūfa, to weave light silks, to work in gold and in silver, and the art of painting.” According to Thaālibi, Chinese paper makers were taken to Samarkand, which then became the first Muslim center for paper manufacturing (Boulnois 2001: 215, 289; Lombard 2002: 83). A state paper mill was established at Baghdad during the eighth century, and this industry arrived in Egypt during the ninth century. However, paper had already been manufactured in Central Asia well before the battle at Talas, and the technique was later

¹⁵ C. I. Beckwith (2011: 152) also correctly notes Central Asian influences beyond Iran: a Sogdian involvement in the Abbasid plot, as suggested by Beckwith, however, remains hypothetical. Beckwith links this alleged Sogdian influence on the Abbasid uprising to the revolt of An Lushan, a Chinese general of Sogdian origin (2011: 146).

¹⁶ Samarra was also the capital of the Abbasid caliphs al-Mu'tasim and al-Mutawakkil (847–861). The caliphs returned to Baghdad in 883.

¹⁷ Morris gives a curiously low estimate of 175,000 inhabitants in 800 CE for Baghdad (2013: 150).

¹⁸ Conversions to Islam progressed quickly, however, aided “by the fiscal benefits that the new converts obtained from their rallying: removal of the *jizya* yearly per capita tax.” “Threatened with losing most of the tax base, through the process of conversion,” the caliphs were at last forced to create “a property tax applicable to both Muslims and non-Muslims” (Lombard 1971: 18, 20).

introduced into Islamic territories (Bloom 2001: 43); “the Chinese influences in Transoxiana and in Persia,” as Gernet has pointed out, “occurred prior to the middle of the eighth century: Chinese paper makers, weavers, goldsmiths and painters were already settled at Kūfa and Samarkand at the time of the Arab conquest” (1999: 250). This borrowing implied innovation, since it became necessary to adapt paper to the use of the reed pen. From China also came mathematical and alchemical knowledge: examples include magic squares, the idea of an elixir (*al-iksīr*) for longevity, and the significance of sulphur and quicksilver, seen as basic substances in the theory of metals. This Chinese knowledge is clearly felt in the corpus associated with Jābir ibn Ḥayyān.¹⁹ Central Asia was a passageway between China and the Muslim world. A tax of two dirhams per camel load was levied, “not excessive in light of the fact that the monthly wage of an unskilled worker was 15 dirhams” (Findlay and O’Rourke 2007: 52). The Abbasids also took advantage of the region’s resources, such as the silver mines of the Hindū Kush. Generally speaking, the state received a third of the products in the mining sector.

Central Asia was also a source of slaves and mercenaries, recruited as men-at-arms. Turks thus formed the guard of the caliphs from al-Mu’tasim (833–843), who was the eighth Abbasid caliph.²⁰ Rulers most likely saw the benefit of using troops with no local attachment; however, this innovation (the establishment of military bodies formed by men of foreign origin) widened the gap between civil society and state power.²¹ Turkish slaves were particularly sought after due to their familiarity with horses. Slaves also worked in the mines, in agriculture and trade, and as servants. “Slavery,” as M. Lombard points out, “was one of the most significant economic facts of the Muslim world,”²² partly reflecting a demographic deficit. In addition to Central Asia, the main regions supplying slaves were East Africa (Zanj and “Abyssinians,” who traveled via Socotra and Aden)²³ and central or eastern Europe (Slavs were brought in

¹⁹ Needham *et al.* 1980: 458sq. The first magic square introduced was probably the Lo Shu, a square of order three, which was a cosmic emblem known in China since the fourth century BCE at least. Muslim scholars quickly developed considerable knowledge about magic squares. Indian influences are possible, although the oft-quoted reference to a magic square of order four produced by Nagarjuna (second century CE) is more likely to be based on a legend than on reality. J. Sesiano (1996: 5–6) states that magic squares in China were a western influence, but he presents no evidence supporting this assertion. In fact, magic squares were unknown in the Greek world. Jābir’s theory on balance in nature was based on the works of Zosimos of Panopolis (late third – early fourth century CE) and other hellenistic authors, but it also bears the mark of Chinese influences. A metal called *khārsīnī* (perhaps a cupro-nickel), used by Muslim alchemists, also arrived from China (Needham *et al.* 1980: 428ff.).

²⁰ This caliph built up a guard of 70,000 Turks. During the late ninth century, the Tulūnids, governors of Egypt, had a guard composed of “24,000 Turks and 40,000 black men” (Lombard 1971: 214). Turkish mercenaries were already present in the Muslim armies at the time of al-Ma’mūn’ (813–833). The Samanids, who ruled Transoxiana, Khwarezm, and Khorasan during the tenth century, benefited from the growing demand for slaves; a tax of 30 to 70 dirhams was levied on the export of each slave. The average price for a slave was 300 dirhams (Findlay and O’Rourke 2007: 28).

²¹ Adshead (2004: 58) rightly points out “a loss of legitimacy for the state,” as well as the social fracture fueling the Kharijite reaction and Shiite claims. The reliance on *ghulām* slave-soldiers would develop in Iran later, during the tenth century.

²² Cf. Lombard 1971: 213–221. Slaves could be freed, and adopted, and the women taken as wives. The Koran and hadiths encouraged believers to include the freeing of slaves in their good works.

²³ The Omanis appear to have played a major role in the African slave trade (see below).

via Khazaria, or Byzantium).²⁴ The capture of Sindh (see below) and raids conducted into neighboring regions would also send a stream of slaves toward the Gulf, up until the ninth century. In Egypt, slaves came from Darfur, as well as from the kingdoms of Kanem, Makuria, and Alwa (see below) (Alexander 2001: 50). Captives were taken to northern Africa via the trans-Saharan routes.

During the first period of Islam, agriculture bloomed, with the development of summer crops based on plants from hot regions, such as rice, sugarcane, cotton, and indigo plant,²⁵ in addition to winter crops based on species of western Asian stock (wheat, barley, peas, flax). The expansion of Muslim networks into India and the eastern Indian Ocean led to the introduction of various plants into Arabia and the Mediterranean and East Africa, after acclimatization in Persia, Oman, and Yemen. One example is the *Citrus* from Southeast Asia.²⁶ Part of the wealth of Suḥār and Oman came from its agriculture. The Arabs also contributed to the dissemination of plants originating in the Mediterranean area and western Asia, for example grapevine and pomegranate. This said, there was no true “agricultural revolution” with regard to the timetable, as Watson has suggested (cf. Aubaile-Sallenave 1984: 253). Moreover, a certain number of tropical species were already present prior to Islam and were not introduced by the Arabs as Watson (1983) states. M. Decker (2009) thus shows that durum wheat spread throughout the Roman Empire from Egypt and the Levant, and that rice and cotton were present in Roman Egypt. Cotton remained a crop of limited significance in Egypt during the Islamic period, until the thirteenth century at least. The Arabs did not contribute to the spread of rice cultivation in Mesopotamia, and although they brought rice to Spain, this grain remained of secondary importance (Decker 2009: 205). Advances in agriculture, however, were real. Methods employing fallow fields and fertilization were popularized, and land irrigation was encouraged; the technique of the *qanāt* was implemented in new regions, and old canals were rehabilitated;²⁷ the Arabs thus repaired the Nahwran canal dug by the Sassanids, allowing them to irrigate lands in Lower Mesopotamia. A new dam was built

²⁴ A slave trade had existed since Antiquity. There were Africans (slaves or freemen), at Mecca at the time of Muhammad. Bilal, a freed Ethiopian slave, became one of Muhammad’s companions. Slaves also came from the western Mediterranean. Al-Faqīh writes: “From the western sea arrive in the east male slaves, Romans, Franks, Lombards, and female slaves, Romans and Andalusians.” While the rise of a slave trade was primarily induced by the economic development of the Muslim world, it also benefited, paradoxically, from the humanitarian reforms of Islam, which stipulated that children born from a female slave and a Muslim man were free. When the man died, the woman was freed. Lewis 1990: 10; Sheriff 2005: 15.

²⁵ The indigo plant spread into western Asia, on the one side, into Yemen, and Egypt on the other (al-Muqaddasī signals its presence in Egypt in the late tenth century).

²⁶ The Muslims also introduced spinach into the Mediterranean world (this plant originated in Persia), and eggplant, from the Indo-Burmese region; eggplant had been cultivated in China for several centuries prior to the Christian era.

²⁷ K. W. Butzer (1995: 145), however, points out the fragility of the irrigation system, usually based on micro-channels. “The violent floods of this epoch may have contributed to the collapse of the Early Islamic irrigation system by 1000.” With regard to irrigation, M. Decker (2009) also notes that advances made during the Islamic period were largely based on Greek and Roman accomplishments, as well as those of Sassanid Persia. In northwestern Iran, the installation of Islamic power occurred alongside setbacks in irrigation. Crop rotation systems had also been in use during Roman times and within the Sassanid Empire.

upstream, on the Uzaym River. Various devices for lifting water were improved, such as the shaduf, the *sāqiya*, and the noria, driven by animals or by flowing water. In Egypt as in western Asia, the state oversaw the irrigation system and participated in its management (Guichard 2000: 182). In most regions, one thus notes a general intensification in agricultural practices (partly founded, in the case of Mesopotamia, on the work of slaves, especially in sugarcane fields).²⁸ The tax system encouraged this intensification, since “the share paid on crops which benefited from investment in irrigation was lower” (Norel 2004: 128). Cultivation of the mulberry tree developed in connection with sericulture. A true agro-industry was put into place: in Iraq and Iran, large-scale sugarcane processing facilities using waterwheels, were set up, while the windmill appeared in Persia by the seventh century, whence it spread to Central Asia and China.

The period between the eighth and the tenth centuries was marked by demographic growth, which may be one factor responsible for the unrest of the tenth century. Apparently, the rural tax burden was generally high, although some researchers have stated that it was lower than during the late Sassanid Empire. According to Ibn Khurdādbēh, the property tax in Khorasan “amounts to 44,486 million dirhams . . . The property tax in Ahvaz amounts to 30 million dirhams, as well as that of Fars”; overall, these taxes were lower – according to Ibn Khurdādbēh – than taxes under Khosrau II (1865: 248, 252).

Agricultural production spurred city growth and the development of handicrafts. “Work in textile fibers and weaving techniques headed the list of these handicraft activities” (Lombard 2002: 15).²⁹ The Muslim Empire manufactured and exported various textiles (silk, sometimes interwoven with rich and raised designs using gold and silver threads, as well as flax, cotton, and wool fabrics), and carpets. Expanding trade networks “triggered the progress and spread of various production techniques, using both vertical and horizontal looms, treadle looms, of Chinese origin, knotted carpet weaving (Central Asia), embroidered *sūsanjird* (Persia), [and] ‘gobelin’-style weaving techniques (Egypt)” (Lombard 1971: 203). Merchants supplied the raw goods and marketed the products. M. Rodinson (1970: 25) has pointed out this involvement of merchants in production, a process which would later prove crucial to the building of capitalism in Europe. B. Shatzmiller (2000) notes that “textile production provides between 18 and 22% of occupational titles”; this sector employed the greatest number of workers. Some regions differed in terms of products, with each of the larger cities developing its own fabric qualities; examples include Fārs, Khūzistān, the Nile delta, and Damascus, which also gained renown for its ironworking. Throughout the

²⁸ A. Watson places this flowering of agriculture between 700 and 1100. He disregards the use of slaves in agriculture during the first period of Islam (1983: 103ff., 123ff.; Aubaile-Sallenave 1984: 252).

²⁹ Clothing marked a person’s social rank. Precious fabrics began to be hoarded, and were also used for decorating palaces; they were the main products exported in the various cores of the world-system. A great deal of silk was produced and traded. M. Lombard (2002: 103–104) writes – in what is probably an overstatement – that “from the eighth to the eleventh century, the Muslim world had an absolute monopoly over silk transit and production and over imports of Chinese silk.” There was, however, a significant Byzantine silk industry, but “it depended on the supply of raw silk by the Muslims” (2002: 102).

empire, steel of the Indian type was produced, known as “Damascus steel”;³⁰ it was used mainly in manufacturing saber blades. Copper handicrafts flourished in all cities. Leatherwork (providing 10 percent of occupational titles) was also highly significant. New types of handicrafts were developed as well: the manufacture of rag paper (a technique of Chinese origin) at Samarkand, Baghdad, and Damascus (which would provide paper to the Christian world from the tenth century onward), as well as in Egypt and Sicily; sugar refining (perhaps invented in Khūzistān during the eighth century).³¹ There was also ceramic production, with main centers at Rayy, Sāmarrā (during the ninth century), Egypt (during the ninth and tenth centuries), northern Africa and Spain (during the tenth century). The empire produced what became known as “three-color” ware imitating Tang pottery. Syria and Egypt were glass-producing regions, as were Iraq and Iran.³² The techniques of distillation inherited from the Greek and Mesopotamian (and perhaps Indian) worlds were applied to the preparation of perfumes and products used by alchemists (for example, quicksilver).³³ Various centers produced and exported soap. Although craftsmen organized themselves into corporations (*asnaf*, singular *sinf*), unlike the European guilds of the twelfth century, these corporations would never provide the framework for political emancipation; instead, they made it easier for the state to control business activity: taxes were levied through the managers of these guilds. The state itself governed some types of manufacturing in the empire’s larger cities, such as those linked to the military or those producing luxury fabrics (*tirāz*, from a Persian word meaning “embroidery,” refers to the workshops manufacturing these luxury fabrics).³⁴ The state also managed shipbuilding workshops, whose warships were sometimes converted into trade ships, “often owned by state dignitaries” (Shatzmiller 2000: 216). Various products of the Muslim world traveled via land and sea routes in Asia and Africa. This increase in movement of merchandise went along with growing mobility on the part of merchants, artisans, and pilgrims.

³⁰ In Europe, this steel would later be called “wootz”; this was a crucible steel, produced via carburization of the iron. The process may have been developed in India around the second or third century (see above). Crucible steel was also being produced in Central Asia (Merv, in Turkmenistan, Achsiket, in Uzbekistan) by the end of the first millennium. According to P. T. Craddock (2003: 248), the Central Asian and Indian techniques probably had different origins.

³¹ The Arabs introduced sugarcane and the sugar manufacturing technique into the Mediterranean. As early as 714, sugarcane was present in Spain, at Valencia, and in Andalusia. Although there were only a few new inventions, it is unfair to state, as Adshead does (2004: 95), that the Muslim world only used a new synthesis of pre-existing elements and assets. In fact there was synergy among the borrowings from China, India, and the various regions of the Muslim Empire.

³² The glassmakers of the Muslim world rediscovered the manufacturing of glass with plant ash as fluxing agent (Dussubieux 2001: 49). This glass had a low alumina content (unlike that of glass using plant ash found in East Africa and Madagascar and dated to the second millennium, which came from India, or perhaps from Southeast Asia).

³³ See Volume 1. As previously noted, the Arabic *al-anbiq* derives from the Greek *ambikos*. The *Book of the Chemistry of Perfume and Distillations* of al-Kindi (803–870) mentions alcoholic distillation from date wine, but this distillation found no application in the Muslim world (Needham *et al.* 1980: 128).

³⁴ Shatzmiller 2000: 216. According to Abd al-Rahmin b. Abu Laili, Muhammad said: “Do not wear silk or brocade and do not drink from vessels of gold and silver, and do not eat in the dishes made of them, for these are for them (the nonbelievers) in this world” (*Sahih Muslim*, book 24, no. 5140); these rules were obviously not obeyed by the ruling class during the eighth and ninth centuries.

A religious minority in the conquered regions, Islam would progress thanks to various incentives and political, social, and economic pressures. Islam's advance was also due to its ideological efficiency and its tolerance of private property and wealth accumulation, which were counterbalanced by mechanisms of support for the most deprived people through alms and religious institutions, to which resources were allocated. Muslims were appointed to the most important positions. The special *jizya* tax, levied on non-Muslims, encouraged conversions. Resistance against the Muslim or Arab expansion, however, appeared here and there, for example in Egypt and in northern Africa.³⁵ Some communities opted for exile; Manicheans from western Asia moved to Central Asia and China; Zoroastrians from Persia fled to India, where their descendants would later be known as Parsis (Persians were already present in Gujarat prior to this period).

The emergence and diversification of a merchant class was an outstanding feature of the Muslim Empire, along with a decrease in state (re)distribution and the development of a "free market, promoted by taxation" (Bresc and Guichard 1982: 270; Norel 2004: 129). From the outset, the social ideal and legal frameworks of Islam "were forged in accordance with the ideas and objectives of a rising class of merchants"³⁶ and "the strategic position" of this class gave its strength to Islam (Hodgson 1993: 107). According to hadiths, the Prophet said: "The merchant enjoys the felicity both of this world and of the next," and "He who makes money pleases God" (Braudel 1979, 11: 498). The first Muslim rulers, however, were not interested in maritime ventures. The caliph 'Umar (634–644) banned maritime enterprise; the ban was repealed only thirty years later. Nevertheless, it was under the rule of this caliph that the canal between the Nile and the Red Sea was rehabilitated; around 775, the caliph al-Mansūr had it closed, probably for military reasons. While "the state left considerable freedom for commercial transactions, it did not base its development on the trade sector, but on agriculture" (Rodinson 1970: 26). Moreover, state rulers could practice trade privately, but "it is remarkable that the Qurayshi merchants, having conquered an empire, lost their status as traders . . . : they became essentially landowners" (Rodinson 1970: 26).

In any event, the appearance of an Islamic empire, forming an immense political and economic area linking the Mediterranean, the Red Sea, and the Persian Gulf, and united under the Umayyad caliphate and the first Abbasids, led to an overall increase in trade. Muslims took up a significant part of the exchange network with India and East Asia, on the one side, and West Africa and East Africa, on the other. Increasing world trade was

³⁵ The reaction in northern Africa was anti-Arab, not anti-Muslim. Islam spread from the Berber clans; it was the result of the encounter of these clans' democratic traditions with the discourse and practices of Ibadi missionaries. The Ibadi influence on the caravan roads led to the constitution of "a common area in West Africa" (Rey 1996). The Kharijite networks were not directly linked to the regional metropolis of Kairouan, and they do not appear to have visited Kairouan on a regular basis (Garcin 2000: 302).

³⁶ Inalcik 1969: 121ff., quoted by Braudel 1979, 11: 142. Prior to the advent of Islam, already, "trade and cults supported each other" (Gaudefroy-Demombynes 1969: 541). "Both the new religion and the new polity and its conquests were largely the work of merchants of a cosmopolitan outlook" (Hodgson 1993: 113). Points of view hostile to the merchant class, however, have been proclaimed by Muslims. For example, At-Tawhīdī (932–1023) wrote: "Concerning merchants, the gaining of pence sets up an obstacle between them and manly virtue and interposes a barrier for them from all that is connected with chivalrous qualities" (Serjeant 1988a, in Subrahmanyam 1993: 18).

also fostered by China's unification and expansion during the Tang period (between the seventh and early tenth centuries).³⁷ Mobilization of the "treasures hoarded in the Sassanid palaces³⁸ or the churches and convents of Egypt and Syria," the looting of Egyptian tombs, mining exploitation in Nubia, all these provided the precious metals which allowed for the issuance of gold (dinars) and silver coins (dirhams) (Ashtor 1971: 15). This wealth led to rising prices for commodities such as grains, an increase that was also due to other factors such as demographic growth (see Bresc and Guichard 1982: 269). Recent research has given new significance to the exploitation of Arabian gold and silver mines (Heck 1999).³⁹ Silver still came from Spain (the mines at Tartessos were once again in operation), as well as from Morocco and Central Asia, and gold was imported from the Urals, the Altai, the Caucasus, Tibet, and Deccan. Moreover, during the ninth century, gold from Zimbabwe was being carried from the Swahili coast toward western Asia and the Red Sea. Another source would provide gold to Egypt and Syria, under the Abbasids and later under the Fatimids: this was western Sudan, with merchants transporting the precious metal along the coast, and via land routes in the continental interior. Starting in the mid-eighth century, thanks to trade and the development of irrigation using *qanāt*, the southern Moroccan city of Sijilmāsa developed along a route leading to Kumbi Saleh, capital of the empire of Ghana, whose rise to power goes back to the same period. "During the tenth century, Sijilmāsa contributed half of the taxes levied by the Fatimid rulers throughout the Maghreb area" and "dinars were issued using gold from the lands of the blacks" (Fauvelle-Aymar 2013: 150). The first mention of Ghana, the "country of the gold powder," occurs in al-Fazārī, in a text dated to the second half of the eighth century⁴⁰ (this gold came from regions further south). For al-Bakrī, however, this country was called Awkār, a name related to Aouker, a region south of Mauritania. According to the Egyptian historian Ibn abd al-Hakam, an Arab military expedition led by Habib ben Abi Ubaida in 734 returned carrying a large amount of gold from Ghana. A caravan route running from the Kumbi Saleh route to Morocco led off to Kairouan. Another route linked Ghana to Fez via Awdāghust.⁴¹ Other routes

³⁷ Chaudhuri 1985: 36. Adshead (2004: 96) correctly observes that unlike the Chinese Empire, the Muslim Empire was primarily a vast area for free trade, not an integrated market or a market in the process of integration. Unlike the authors previously quoted, M. Shatzmiller (2000: 215) states that the role played by international commerce and long-distance trade within the Muslim Empire has been overestimated. He connects this relatively limited role of long-distance trade to an "incomplete division of labor" (2000: 214).

³⁸ During the early period of Islam, the Umayyads took advantage of the storage of precious metals in Egypt, and of the Sassanid royal treasury, for their issuance of money. This treasury consisted "of nine billion drachmas" (Findlay and O'Rourke 2007: 49).

³⁹ *Contra* Crone 1987. Testimonies come from archaeology and from Greek, Roman, and Arab texts. Al-Tabarī (ninth century), al-Wāqidi (ninth–tenth century), and al-Muqaddasī (tenth century) thus signal the significance of precious metals as a source of wealth for the merchants from Mecca. As previously noted, the gold mine of Mahd ad-Dahab was already in operation early in the first millennium BCE. Testimonies by al-Balādhurī (ninth century) and al-Bakrī (eleventh century) show that Arabian mining was financed with private capital (Heck 1999: 385).

⁴⁰ Al-Fazārī also mentions a state called Waram, in Senegal (Lewicki 1974: 13).

⁴¹ Another route ran nearer the coast. A state developed in Takrūr, in the lower Senegal River valley (Ashtor 1971: 17; Devisse 1997: 292ff.). J. L. Bacharach (1983: 161) points out the dominant use of gold coins under the Fatimids, in connection with the importation of gold from West Africa. The beginnings of gold exploitation in this region are poorly understood. Its exploitation was certainly not very sizeable prior to

stretched further east: from Gao, in the Niger Valley, a route ran to Libya and Egypt, and another connected Lake Chad with the oases of Fezzan and Libya.⁴² The significance of the trade attracted merchants not only from Egypt, but also from Baghdad, Iran and Transoxiana, as described by Ibn Ḥawqal (977), who saw a credit note *sakk* amounting to 42,000 dinars at Awdāghust (Findlay and O'Rourke 2007: 53) (this check, in fact, may have been seen at Sijilmâsa instead [Fauvelle-Aymar 2013: 73]. Islam spread into western Africa via the caravan routes, first among merchant groups, and later within the political sphere of chiefs and courtiers.⁴³ The aristocracy of the Gao kingdom converted to Islam as early as the late tenth century. Virtually independent from the Abbasid caliphate, the Tahert Ibadi imamate founded in 776 controlled most of northern Africa, before declining in Tunisia from 800 onward, confronted with the Aghlabids from Kairouan, and in Morocco, where the Idrisids from Fez (789–985) spread Shia Islam and installed a centralized political power.⁴⁴ The Tahert imamate was crucial to the expansion of the trans-Saharan trade. “It was at this time that trade developed along the routes leading to Sudan” (Fauvelle-Aymar 2013: 69, quoting al-Saghîr [tenth century]). The Ibadis of Tahert contributed to the development of long-distance trade (by sea and land) and to the spread of technological and scientific progress. According to P.-P. Rey, it was within the context of this imamate, linked to Spain's Umayyad emirate, that

the seventh–eighth centuries. Chemical analyses recently conducted confirm the development of gold exploitation south of the Sahara during the ninth century (Gondonneau and Guerra 2002).

⁴² These trade routes were the continuation of routes already in use, probably during the first millennium BCE (see Volume 1); these were routes later used by the Roman and then the Byzantine Empire, prior to Islam (Fenn *et al.* 2009; Magnavita 2013). The kingdom of Kanem (northeast of Lake Chad) was one of the oldest African states. Further south, commercial routes probably connected Jenne to Begho, located directly south of an auriferous region on the Volta River and north of the gold fields of the Akan country (nearby, the metallurgic site of Hani shows ironworking by the second century CE) (these routes would later develop, especially from the twelfth century onward). Jenne-Jeno covered 25 hectares in 400 CE and 41 hectares during the eighth century (Hansen 2000a: 15). This city was a center for the cultural spread of Islam (Coquery-Vidrovitch 1993). The discoveries at Igbo-Ukwu (Nigeria), a site famous for its beautiful bronzes showing the use of the lost-wax technique, reveal connections between the Niger delta and the north (Gao) as early as the ninth century, marked by the importation of copper, glass beads, and textiles (Devise 1990b: 446; Shaw 1990: 505ff.). For Sutton (1991), these beads may have reached eastern Nigeria from the Christian kingdoms of the Nile, via a route leading to Lake Chad (Insoll [2003: 269], however, here expresses some reservations; Magnavita [2003: 134 n. 6] also points out that imported beads must have arrived along trans-Saharan routes and the Niger valley; glass beads dating to the Igbo-Ukwu period have recently been excavated at Kissi in northeastern Burkina Faso; some of these beads are of the Indo-Pacific type; the site of Garbey Kourou, in western Niger, has also yielded glass beads, dated to between the fourth and the sixth centuries). The founding of the Ife state, to the west of Benin, may date back to the late first millennium (Ife reached its peak between the twelfth and fourteenth centuries). Sub-Saharan Africa exported gold, ivory, and slaves (see below). Note that the introduction of a weaving industry appears to have occurred between the seventh and tenth centuries.

⁴³ The spread of Islam within the ruling classes occurred during the eleventh century. While Muslim merchants from northern Africa were active in the centers of Awdāghust (Tegdaoust) and Tadmekka (north of Gao) during the tenth century, their presence had already been well attested during the eighth and ninth centuries. These merchants were primarily Ibadis. Awdāghust was not just a commercial pole, but also an “industrial” center, where craftsmen worked copper, imported from the north (Fauvelle-Aymar 2013: 78).

⁴⁴ The Ibadis are a moderate Kharijite sect, formed in Iraq during the late seventh century.

the legacy of Antiquity was reassessed, combining plans for controlled and pondered action on nature (*physis*) and democratic governance by the community (*isonomos*) aside from any principle of transcendence (Rey 1998: 153) . . . The introduction of this type of incipient universalist rationalism into Andalusia during the ninth century, along with its empowerment within Islam with respect to the Divine revelation in works by Avicenna (Ibn Sina) during the tenth century, and later by Averroes (Ibn Rushd) during the twelfth century, may prove to be one step further toward the twin formation of a modern science and modern state during the thirteenth century in the kingdom of Sicily, under the German emperor Frederick II of Hohenstaufen [see below]. (Berger 2010: n.p.)

The religious tolerance and democratic character of the institutions set up in the Tahert imamate worked in favor of the spread of Islam in its Ibadi manifestation; the Berbers, moreover, showed a “greater willingness to adopt heterodox doctrines of Islam” (Fauvelle-Aymar 2013: 67).

Gold also made Nubia wealthy, and ensured the development of the state of Makuria (Arabic Mukurra) from 600 onward; its capital was the ancient city of Dongola. Makuria converted to the Christian orthodox Melkite rite during the sixth century before adopting Monophysitism, which was already dominant in northern Nubia.⁴⁵ This state was at its peak around 800.⁴⁶ Nubia was reunited under the rule of one king at the end of the eighth century. The Nubian victory of 652 over a Muslim army allowed the kingdom of Makuria to maintain its independence and to deal with Egypt on the basis of managed trade (*baqt*). A papyrus dated to 758, found at Qasr Ibrim, is a letter from the governor of Egypt to the king of Nubia, in which the governor complains about Nubia’s non-compliance with a trade treaty (slaves not delivered, goods of Egyptian merchants confiscated, and so forth) (Fauvelle-Aymar 2013: 47). During the mid-ninth century, a Nubian prince traveled to Baghdad to renegotiate this treaty (Fauvelle-Aymar 2013: 50). Routes linked Makuria not only to Egypt, but also to the Lake Chad region. The demand for gold increased during the tenth century under the impulse of the Umayyads from Spain, and the Fatimids,⁴⁷ who controlled Sijilmāsa along the trans-Saharan gold route in 951. It is remarkable that the gold trade developed almost at the same time in West Africa and Zimbabwe (probably slightly earlier in West Africa).⁴⁸ Ethiopia provided a third source for gold. The movements of precious metals thus

⁴⁵ Another Christian state, Alodia (Arabic Alwa), was formed in southern Nubia, in the region of the sixth cataract, with Soba as its capital. This state was able to exploit the gold mines located in the south (according to Ibn al-Faqīh, ninth century; Lewicki 1974: 28). Northern Nubia was home to the Christian state of Nobadia. The Nubian administrative organizations seem to have been influenced by the Byzantine administration: Nubia was in contact with Byzantium prior to the arrival of the Arabs in Egypt (Michalowski 1984: 353).

⁴⁶ Fauvelle-Aymar also points out the importance of the Nubian king George II at the end of the tenth century: “the Ethiopian ruler asked him to contact the Christian patriarch from Alexandria in order to obtain the consecration of a new Metropolitan” (2013: 61).

⁴⁷ Devisse 1990b: 412–433. The minting of gold coinage of good quality expresses “the power and the glory of the new [Fatimid] power [against weaker Abbasid minting]. The demand of the Fatimids for gold was motivated by ideology, political realism and economic realism” (Devisse 1990b: 422). At the end of the tenth century, however, the Umayyads from Spain were the main beneficiaries of the trans-Saharan gold trade (Devisse 1990b: 427–428).

⁴⁸ Production in Zimbabwe, however, became significant only during the thirteenth century.

helped integrate new areas.⁴⁹ Other “goods” circulated along the routes of the African interior: Makuria and Alwa provided slaves for the Muslim Empire and later for the Fatimids of Egypt; this was the continuation of the slave trade already in place at the time of the Romans. Captives were taken across the Sahara,⁵⁰ where they also contributed to the development of oases and salt mines. Moreover, it is clear that merchant networks connected the Indian Ocean to West Africa (through the Mediterranean, and/or perhaps via other routes): cowrie shells mostly collected in the Maldives⁵¹ have been found in tombs of high-status individuals in northeastern Burkina Faso (fifth–eighth century),⁵² and at Awdāghust (ninth–tenth century). “One can observe their merchandization from the eleventh century onward” (Devisse 1990b: 450). Cowries have been excavated at Akumbu (Mema) (dated to between 780 and 1010), in the hinterland of the kingdom of Ghana (Insoll 2003: 249).

Heterodox Muslim communities often appear to have imposed themselves on long-distance trade. Examples include the Ibadites in East Africa, northern Africa, and on the oases along the caravan routes.⁵³ Other religious communities were active on exchange networks. The major role played by the Jews in the Mediterranean, Central Asia, along the Silk Roads, in Russia (Khazaria), and in the Indian Ocean has often been mentioned (Lombard 1971). Traders from these various networks helped transfer both knowledge and techniques.⁵⁴ Between Byzantium and the Muslim world, it was the Armenians who held the upper hand in trade.

Islam encouraged monetary circulation. In the Koran it is written: “Those who hoard gold and silver and spend it not in the way of Allah – give them tidings of a painful punishment.”⁵⁵ “It was generally agreed that the rulers ought to protect merchants” and even for the conservative Hanbali school which appeared during the ninth century, “labor and profit were both a right and an obligation” (Rosenberger 2000a: 246). Trade was accompanied by the development of credit and sophisticated banking instruments. This movement was facilitated by the introduction of a positional decimal system, using Indian numerals and the zero, at either the time when the mathematician al-Khwārizmī (780–847) wrote *On Calculation with Hindu Numerals* and *The Compendious Book on Calculation by Completion and Balancing* (825

⁴⁹ Norel (2004: 127) also notes that new techniques in ore processing using mercury from Spain permitted an increase in production.

⁵⁰ Al-Ya‘qūbī, for example, mentions the role of the Zaghāwa from Kanem in the slave trade (Lewicki 1974: 23). Idrīsī writes: “The people from al-Aqsa in Maghreb go [to Takrur] with wool, copper and beads; they bring back gold and slaves” (Magnavita 2008: 252).

⁵¹ The *Account of China and India* (ninth century) and Mas‘ūdī both mention their collection, controlled by the queen of the Maldives. The Maldivians converted to Islam at an early date.

⁵² Site at Kissi 3, Magnavita 2003. The tombs have also yielded glass beads and carnelian, and bracelets or rings made of copper alloys.

⁵³ “Economic history,” as L. Dumont notes (1966: 212), “is boxed in by the history of heresies.”

⁵⁴ In the textile industry, for example, toward Italy (Norel 2004: 133), and also in the field of banking techniques.

⁵⁵ Surah IX, 34. During the fourteenth century, Ibn Khaldun would state that money must circulate and should not be kept privately (Devisse 1997: 420). He “was the first to present the major functions of money as a measure of value, a store of value and a ‘numeraire’” (I. M. Oweiss, faculty.georgetown.edu/imo3/ibn.htm).

and 830), or a bit earlier⁵⁶ (the adoption of Indian numerals also facilitated progress in administrative techniques) (Burke 2009a: 183). Not only merchants but also *‘ulamā* studied mathematics. The significance of credit and an upsurge in trading companies made it necessary to keep accurate books and records. Business ventures were often conducted using a variety of currencies; exchange operations and complex calculations were needed.⁵⁷ Various forms of partnership agreement, which concerned not only trade but also the industrial sector, were viewed as licit. The concept of “universal partnership” (*mufāwada*) united two families or two persons of equal rank and religion over the long term. “Both partners [were] equally liable for any obligations undertaken by either of them in exchange for something valid within the partnership” (Udovitch 1970b: 43, quoting Qūdūrī, eleventh century). According to this system, each partner could act as the agent of the other; the *mufāwada* partnership involved “the mutual agency and surety of the partners” (Udovitch 1970b: 44).⁵⁸ Unlike a “universal partnership,” a limited investment partnership, or *‘inān*, in which the two partners provided (part of) their capital and their labor, did not require equal status between the two partners. While each contractor acted as the agent of the other, he was not his partner’s guarantor: “liability [was] confined to the assets of the partnership” (Udovitch 1970b: 41). In addition, Ibn Qudāma differentiates credit partnership (*ṣirkat al-wujūh*), where both partners pooled credit for a commercial venture, from a *commenda* partnership (*mudāraba*, *muqāraḍa*), where one partner provided the capital that a traveling associate used, with benefits shared between the partners.⁵⁹ The *commenda* partnership, rendering it possible to combine financial and human resources, probably originated in Babylonia and in the caravan trade of ancient Arabia.⁶⁰ J. Goody (2007) points out

⁵⁶ Labib 1969: 91. The Indian system may in fact have been introduced as early as 760. The Persians Ibrāhīm al-Fazārī and his son Muhammad al-Fazārī (who died in 796) translated books by the Indian mathematician and astronomer Brahmagupta (seventh century). Indian numerals were first mentioned by the Syrian bishop Severus Sebokht in 662. This bishop was a scholar also known for his role in the transmission of Greek knowledge into Arabian circles; in particular, he wrote a treaty on the astrolabe. Al-Khwārizmī, ambassador of the caliph in Khazaria between 842 and 847, probably benefited also from contacts with scholars versed in Chinese mathematics. Al-Khwārizmī wrote several major works which were translated in Europe by either Robert of Chester or Gerard of Cremona during the twelfth century.

⁵⁷ The texts from the Cairo Geniza dated to the eleventh and twelfth centuries (see below) reflect this complexity. In calculating profit and each partner’s share, one took into account fluctuations in the value of currencies between the time the partnership was contracted and the time the profit would be divided (Udovitch 1970b: 52).

⁵⁸ “Of the four major schools of Muslim law, only the Ḥanafis recognize the validity of this type of partnership” (Udovitch 1970b: 42).

⁵⁹ The labor partnership (*abdān*) should also be mentioned, in which “both partners contribute work and share the benefits if they are licit” (Elisséeff 1977: 181–182). Credit partnership, also called “partnership of the penniless” (*sharikat al-mafālis*), was “a method for augmenting or creating capital” (Kāsānī, late twelfth century, quoted by Udovitch 1970b: 55).

⁶⁰ The ancient world knew of forms “similar to the *commenda*: the Babylonian *tapputum*, the Byzantine *chreokoinonia* and the Jewish *‘isqā*.” The *commenda* partnership “was known and discussed in the Talmud; and it is [also] discussed in the *Corpus Juris civilis* of Justinian” (Udovitch 1970a: 8, 172–173). “In the *mudāraba*, the traveling partner is not exposed to any risk, as in the *commenda*, whereas the similar Byzantine or Jewish contracts, in use prior to the *commenda*, did not contain this clause: Udovitch [1970] concluded that the *commenda* appears to have borrowed from the sole Arab technique” (Norel 2009b: 73). Pryor (1977), however, has considered the *commenda* as a hybrid of Arab, Jewish, and Byzantine techniques.

a connection between the spread of the *commenda* partnership within the Muslim world and the introduction of the Indian system of positional notation of numerals. Well adapted to long-distance trade, the *commenda* had already been borrowed and adapted by the Italian city-states by the end of the tenth century.⁶¹ The increasing use of credit instruments in long-distance trade and local transactions (the *suftaja*, or payment order, note of credit, the *hawāla*, a document involving transfer of debt, and the *ruq'a*, note of payment, check) facilitated exchanges and compensated for the lack of ready money. The use of credit instruments became a form of commercial investment and partially explains the ongoing economic expansion:⁶² one borrowed money in order to engage in a venture, and one sold on credit.⁶³ Many documents from the Cairo Geniza (see below) refer to credit (Goitein 1967: 250ff.). The ban on usury by Islamic law was circumvented by various practices.⁶⁴ Some documents from the

⁶¹ In addition to the field of credit (see below), the influence of the Muslim world on merchant practices in Italian cities is shown by the origin of the Italian terms *doana* ("customs"), from the Persian *divan*, via the Arabic *diuān*; *fondaco* ("outpost"), from the Arabic *funduk*, "caravanserai, trading place" (a term itself borrowed from the Greek *pandokeion*, "hotel for travelers"); *tariffa* ("tariff"), from the Arabic *ta'rif*, "notification"; and perhaps *traffico* ("traffic"), from the Arabic *tafrīq*, "distribution."

⁶² Goldberg 1991: 7. The *hawāla*, "delegation of credit," "which involved the transfer of rights of payment of a debt to a third party," functioned as a check (Goldberg 1991: 9); an order was given to a third party to pay the beneficiary. The Arabic term is at the origin of the Italian *avallo* (French "aval"). "The [*suftaja*] was frequently used to refer to an order of payment given by the government to persons having credit claims on it" (Ashtor 1972: 556). The *suftaja* was also a payment order which sometimes accompanied a loan contract. There were also *suftaja* with no name, payable to the bearer. "In short, the term does not always indicate exactly the same banking instrument" (Ashtor 1972: 556). Issued by (and drawn on) a banker or a representative of the merchants with a certain cost, the *suftaja*, a term often translated by "bill of exchange," allowed a person to lend money and obviated the need to transfer liquid funds over long distances. "A fee was charged for its issue, and after presentation a daily penalty was due for any delay in payment" (Goitein 1967: 243). According to some authors, the Muslims did not combine deposit banking and loan of the sums deposited, but this statement is probably erroneous (see Goitein 1967: 247, for Jewish bankers). The bankers accepted "orders of payment," "which is another way of saying that they advanced funds" (Goitein 1967: 245-247; Abu-Lughod 1989: 223). They "granted advances on *suftaja* whose issue had been announced to them but which had not yet arrived" (Goitein 1967: 245), and they committed themselves in *commendae* using credit. The use of the *suftaja* is well attested during the eleventh century in the Indian Ocean (Goitein 1967: 243ff.). The *šakk* and *ruq'a* each corresponded to a "check," a word which derives from the Persian *šakk*. Already known in Egypt during the Ptolemaic period, the *šakk* was "an order of payment made through the banker with whom the drawer had an account" (Ashtor 1972: 555). "Payment by check is the object of study in the *Mishna*, which reflects banking usage in Palestine under Roman domination." Checks were used even in the trans-Saharan area (Labib 1969: 89, according to Ibn Ḥawqal). The Persian Nasir-i Khusrau notes that in Baṣra, by the middle of the eleventh century, "common usage was to pay by *šakk*" (Labib 1969: 89). The term *khaṭṭ* refers to a bond, or bill of exchange.

⁶³ "Selling for credit," Sarakhsī (late eleventh century) writes, "is part of the practice of merchants" (Udovitch 1970a: 79). Even agricultural products "were legally sold at auction before they were ripe and harvested" (Labib 1969: 94). Granting credit implied the issuance of a note of acknowledgment of debt (*iqṭar*).

⁶⁴ The amounts borrowed were often lower than what was paid in return: "the normal form of taking interest was the discounting of a note – that is, supplying the debtor with a lesser sum than he would be called on to repay" (Labib 1969: 88-89; Goldberg 1991: 8). Fictitious increases in the amounts lent, or reimbursements in kind, skirted the ban on usury. The bankers levied money on a check. "A thing is sold on credit for a larger sum than it would be sold for in cash," recognizes Sarakhsī (Udovitch 1970a: 80). Moreover, while income from merchants' sales was deposited in silver with bankers, the assets were measured in gold. The exchange rate fixed by the banker between gold and silver allowed him to achieve

Mamluk period in Egypt mention interest *ribā* on loans (Goitein 1967: 256). These instruments of credit were already in use in Persia, in the Byzantine Empire, and previously in Mesopotamia.⁶⁵ They would later develop in India (*hundi*, an equivalent of the *suftaja*)⁶⁶ and in Italy.⁶⁷ The climate of cooperation among merchants has been well described by A. L. Udovitch, who emphasizes the flexibility of partnerships that aimed primarily for profit.⁶⁸ The *suftaja* was used by the government as a payment order for bankers and merchants holding a credit on the state. The farmer-generals sent the taxes collected in the provinces to Baghdad via *suftaja*.⁶⁹ Like the notes of credit in China, these tools led to a significant reduction in transaction costs. Unlike

a profit (Udovitch 1970a: 10). Any delay in the reimbursement of a loan was compensated for by the payment of some money, and a delayed payment for merchandise was compensated for by an increase in its price (Goitein 1967: 197ff.). The possibility of investing capital in a *commenda* and receiving part of the profits in return can be viewed as the equivalent of a loan with interest. Various texts, *hiyal*, aimed at addressing the gap between the law and practices, for example Shaybānī's compilations (early ninth century). During the eleventh century, Al-Ghazālī wrote that "anyone conducting commerce in accordance with the law was looked upon as ridiculous by all other merchants" (Udovitch 1970a: 7).

⁶⁵ The term *suftaja* derives from the Persian. "The Persian origin of the Muslim draft" thus seems likely (Ashtor 1972: 558). The Arabic term *jahbadh*, "banker," is also of Persian origin, as well as *ṣakk* (see above). The Byzantine world used an instrument equivalent to the *suftaja* (Ashtor 1972: 558).

⁶⁶ Habib 1990: 393; Subrahmanyam 1994a: 33ff. As negotiable promissory notes or bills of exchange, *hundi* were in use during the fifteenth century and probably much earlier from the tenth century onward; their use increased during the sixteenth and seventeenth centuries. In addition, the Indians would develop an insurance system for goods transported. Habib (1990: 398) emphasizes that Europeans in the seventeenth century still held no advantage over the Indians in commercial techniques.

⁶⁷ E. Ashtor goes to great lengths to demonstrate that the Italian bill of exchange was not a simple borrowing from the Islamic *suftaja*. However, 160 Amalfitan merchants were present in an exchange market at Fustāt in 996 (Ashtor 1972: 561). Ashtor maintains that "the *suftaja* is not a bill of exchange by means of which a sum of money is changed into another currency"; he notes that "tax farmers and the provincial governors sent dinars to Baghdad [through *suftaja*] although they had collected dirhems" (1972: 562), but these cannot be considered different currencies (data concerning the Red Sea in the thirteenth century, however, do show operations involving different currencies) (see below). Ashtor concludes that "[Although] the bill of exchange is not a banking instrument of Muslim origin adopted by the Westerners, we must also recognize that the contacts of Christian merchants with the highly developed banking life of the Muslim countries influenced their activity and customs considerably" (1972: 572-573). It is true, however, that the Italians would later improve upon and develop this tool borrowed from the Muslim world.

⁶⁸ Udovitch 1970b: 59ff., 1970a: 135-136, 204ff., 261. Even in the *ʿinān*, each of the partners could delegate his powers to a third party, who obtained no immediate profit from his work, but hoped to obtain future help in return. Agents could loan money to outside parties. The partner had the right to offer cooperation (*biḍāʿa*), and to reinvest the capital entrusted to him in another *commenda*. An agent could accept a transfer of debt (*ḥarwala*) in payment for merchandise (which obviously implied risk-taking) (Udovitch 1970a: 207). He had the right to buy and sell on credit. Moreover, a man could invest in capital deposited with him in a *commenda* (for example, money from orphans under his care). Caliph ʿUmar's sons went so far as to invest money destined for the Treasury in a *commenda*. The Hanafites accepted forms of association in which one of the partners invested his labor (Sarakhṣī gives the example of an association between the owner of a workshop and a craftsman) (Udovitch 1970a: 68, 71-72). A partnership where the capital consisted of merchandise was accepted under certain conditions (Udovitch 1970a: 63-64, 182-183). The Hanafite texts of laws studied by Udovitch in fact reflect the practices and needs of the merchants at this time.

⁶⁹ Ashtor 1972: 557. The Abbasid government in Baghdad and the Muslim authorities in Egypt made use of these payment orders. Ashtor describes several types of *suftaja* in detail. Some credit letters were to be paid at certain dates; others were made payable "to bearer."

what occurred in Europe starting in the fifteenth century with bills of exchange, no market ever developed on notes of credit, although Goitein (1967: 246) observes that the *ruq'a* notes were negotiable: they could be “bought.”

This set of commercial techniques certainly contributed to the success of Muslim merchants and of banker-changers. “By 400H/1000 AD, the banker had made himself indispensable in Basra: every trader had his banking account and paid only in checks on his bank in the bazaar . . . Around 290H/902 AD, Ibn al-Faḥīh al-Hamadānī wrote: ‘The people of Basra and the Himyarites are the greatest money-grubbers. One who travels to the remotest region of Ferghanah or the western edge of Morocco is sure to find a man from Basra or a Himyarite there’” (Mez 1922: 448; Labib 1969: 90). Documents from the Geniza provide a great deal of information on operations of change between currencies by banker-changers. Fustāṭ had a “House of Change,” where changers held semi-official status (Goitein 1967: 238). Money changers “kept deposits made by merchants, enabling them to pay by checks of those times (*suftaja*), and even by endorsements, i.e. payment by check to a third party” (Gil 2003: 318).⁷⁰

Muslim princes, caliphs, and viziers, engaged in entrepreneurial activity, in both industry and commerce. Tax collectors, officials, military chiefs, and landowners also invested in manufacturing enterprises and merchant houses: “The association between labor and capital or *commandite* (*qirad*) was common” (Elisséeff 1977: 182). Rodinson (1966) has pointed out that “capitalist Muslim merchants became involved in the production process and imposed regional specializations on production” (Norel 2009b). Conversely, merchants could obtain access to official functions and even to the position of vizier, which means that they controlled state finances, as we later see in Fatimid Egypt. These individual and family achievements were isolated phenomena, however: unlike what we observe later in Europe, the merchant classes in Asia and in Africa were incapable of institutionalizing any form of political power (Mielants 2007: 161). The alliance sometimes referred to between the ruling classes and the merchants should not delude us (Bausani 1971: 100).⁷¹

The Abbasid caliphate was heterogeneous; it did not form a “unified market” (Rosenberger 2000b: 112). M. Lombard distinguishes four great “commercial façades” within the Muslim Empire. The northwestern façade included three relatively distinct areas. While trade was in surplus with Byzantium, it was in deficit with regard to Russia and the Christian West, which exported furs, swords, horses, leather, and slaves, resulting in a flow of gold and silver toward these regions. The southwestern façade, in northern and Saharan Africa, was in part a Muslim innovation (although, as already pointed out, Phoenicians/Carthaginians and Romans had shown the way); trade here was largely in surplus. The northeastern façade, from Central Asia, provided three great trade directions, toward southern Russia and Siberia to the north, whence came furs, slaves, iron, and weapons; toward India to the southeast, which exported textiles, perfumes, and slaves; and toward China to the east, via the Silk Roads. Trade appears to have been in deficit along the two first axes, and balanced along the last one.

⁷⁰ On the practice of “endorsement” (*iḥāla*) of checks, see Gil 2003: 302ff.

⁷¹ There was often an alliance; however, it is an exaggeration to state that the merchant bourgeoisie relied on the state and that it was “dependent on the state,” with no functional autonomy (Ayubi 2008: 83, 100).

The multiplicity of Asian routes and their vitality explain the significance of the urban centers in Khorasan and Khwarezm. The fourth façade, to the southeast, corresponded to the maritime routes of the Indian Ocean (Lombard 1971: 236ff.).

In Indian Ocean trade, during this first Islamic “golden age,” the Persian Gulf held much more significance than the Red Sea (despite the fact that spices were primarily shipped to the Mediterranean via the Red Sea). Besides Baṣra, there was the port of Shiraz, at Sīrāf, which held a prominent position in trade with India, eastern Asia and the African coast, especially during the eighth and ninth centuries; its importance was still being emphasized by Masʿūdī during the tenth century. At that time, the city of Sīrāf covered 110 hectares. Each year, merchants from Sīrāf organized their fleet to sail to India and China, as well as toward the city-states of East Africa.⁷² Various types of Chinese ceramics have been unearthed at Sīrāf and other cities (at Sāmarrāʾ for example), especially white ceramics – also found at Daybul (Banbhore), Antioch, and Fuṣṭāṭ⁷³ – as well as celadons and three-color ware. These types of ceramics were soon imitated, sometimes using similar shapes made of glass (Scanlon 1970: 84). Moreover, most of the Red Sea trade during the ninth and tenth centuries may have been in Persian hands: Abū Zayd signals that vessels from Sīrāf stopped at Jeddah during the early tenth century, and according to Iṣṭakhṛī, the Persian merchants who had settled at Jeddah formed an influential elite. Writing in the late tenth century, Ibn Ḥawqal notes that Jeddah was prosperous in ancient times thanks to trade controlled by Persians; however, when these Persians were forced to flee, for political reasons, this led to the city’s decline (Rougeulle 1996: 167). While the population at Sīrāf was mainly Sunni, Horton and Middleton observe that dissident Muslim groups, notably Kharijites,⁷⁴ dominated the trade networks at Baṣra and in Oman. The merchants of Baṣra appear to have been essential to the slave trade with the East African coast, in connection with the Omanis (Horton and Middleton 2000: 73).

Besides Sīrāf, the Omani port of Suḥār was a major port of trade, in particular between the eighth and tenth centuries, a period of expansion of the Ibadi movement in Oman. At its peak, Suḥār covered 73 hectares. The Ibadis formed an independent state between 750 and 790, a “response by the merchants of the Indian Ocean to an [Umayyad and later Abbasid] attempt at controlling trade” and to the heavy taxes imposed on them (as much as 300,000 dinars during the Abbasid period). The Omanis were active in trade with East Africa, India, and China. It was probably to secure their African trade that they launched an expedition on Socotra in 750, as this island was

⁷² Chaudhuri 1985: 39. In addition to Sīrāf, thirty-eight sites dated to the ninth–tenth century have been identified along the Iranian coast. In contrast, the role played by the Arab coast in the Gulf was probably more limited: this region was under Qarmatian domination at that time. These Qarmatians were “notorious for their acts of piracy and used to levy high taxes on the vessels which stopped” in their ports (Rougeulle 1996: 164). The Qarmatians, however, were also active in long-distance trade, since in 1004, “they owned as many as 30,000 black slaves” (Pradines 2009: 64).

⁷³ Among the items of Chinese stoneware excavated at Sīrāf, one shard bears Arabic names which had been engraved before the glaze was applied to the ceramic: this piece thus belonged to a Muslim living in China (Tampoe 1989: 101). The Arabic name of the porcelain, *ṣīnī*, derives from China’s name, *aṣ-Ṣīn*.

⁷⁴ After the battle at Siffin (657) between the caliph ʿAlī and Umayyad general Muʾawīya, the Kharijites, until then supporters of ʿAlī, refused the arbitration ʿAlī had accepted from Muʾawīya.

a strategic node in the maritime networks. They may have taken control of Pemba during the same period. The Omanis possessed a war fleet of 300 ships around 841 (Horton 2001: 462, quoting Wilkinson 1981; see below).

Ships sailing eastward followed two main routes: one ran along the Asian coast toward Daybul, and another ran directly to South India, from Suḥār. As early as the Umayyad period, Suḥār yielded green-glazed Chinese pottery and Indian ceramics. At the tip of Oman, Abbasid ceramics have been excavated at the port of Ras al-Hadd, along with products from China, Africa, and India (Kervran 1994: 339) (the exploitation of copper mines also explains Suḥār's prosperity).

In 711, an Arab army sent by the Umayyad governor of Iraq took Daybul, a city in Sind.⁷⁵ Daybul became a major port for the Indian Ocean trade (Daybul=Banbhore may have been the site of the "Barbarikon" mentioned in the *Periplus of the Erythraean Sea*). The Arab geographer Mas'ūdī (tenth century) notes that many Muslims had settled along the west coast of India (a fact already noted by Balādūrī during the ninth century). As early as the eighth century, a sizeable Muslim colony was living in Sri Lanka, as shown by the ceramics and coins found on this island. "Descriptions of the first Arab invasion of Sind, narrated in a later source – the Chachnama [thirteenth century] – point to direct voyages between Daibul and Sri Lanka" (Chakravarti 2012: 76). Muslims also settled in the Maldives and Laccadive Islands. Abū Zayd (tenth century) signals that the Omanis went to the Maldives in order to build ships, thus taking advantage of the abundance of coconut trees and the production of coir in these islands. Mas'ūdī also indicates that merchants from Oman and Sīrāf used to sail to the Maldives. Trade in cowries was another reason for these journeys.⁷⁶ In addition, the pilgrimage to Mecca had a positive impact on both maritime trade and cultural exchanges.

Archaeology, on the one hand, and written Arab and Persian sources, on the other, shed light on commercial exchanges throughout the Indian Ocean as well as the ships' routes. The anonymous *Account of China and India* (*Akhhār al-Sīn wa-al Hind*) (written in 851), works by Ya'qūbī (c. 880) and Ibn Khurdādhbeh (c. 885), for the ninth century; the *Meadows of Gold* by Mas'ūdī, and a book by al-Sirāfi entitled *The Authentic Book of Stories of the Sea and its Marvels* (*Al-Sahīh min akhhār al-bahr wa-'adjā'ibihā*), written c. 968,⁷⁷ for the tenth century: all describe the adventures of Arab and Persian merchants who departed from Baṣra, Sīrāf, or Suḥār to sail to Daybul and Kulam, in India, and on

⁷⁵ The capture of Daybul has been presented as an act of revenge after Indian pirates from this region captured eight ships "which the ruler of Ceylon had dispatched fitted with presents, pilgrims, Mahomedan orphans and Abyssinian slaves, to secure the good-will of Hajjaj and the Khalif" (Mookerji 1999: 185).

⁷⁶ "The treasure of [the] queen [of the Maldives] [is made of] cowries." Mas'ūdī, para. 367 and 370, 1962: 134, 137. The *Account of China and India* indicates that the Maldivians grew coconut trees. "Their wealth consists of cowrie shells, and the queen hoards them in her treasury" (Maqbul Ahmad 1989: 34). "In the kingdom of Rahma [Pegu, according to Ferrand, but most likely refers to Bengal and Orissa], cowries are used as the medium of exchange in commerce" (Ferrand 1913, 1: 81). Al-Bīrūnī, during the eleventh century, writes of the "Cowry Isles" (Maldives), Dīva kūdhā, and of the "Coir Isles," Dīva kānbar (Laccadive Islands) (Hogendorn and Johnson 1986: 24).

⁷⁷ Ducène 2010. This book was entitled *The Book of the Marvels of India, Kitāb 'Ajā'ib al-Hind*; see al-Hādī (ed.) 2006. The author is not Buzurg Ibn Shahriyār, but Abū 'Imrān Mūsā ibn Rabāh al-Awsī al-Sīrāfi.

to the ports of the Malay peninsula, Qaqla (probably the ancient Takola, equated with Takuapa), and Kalāh (Kra, Kedah, or Kelang [see below]) (located one month's sail from Kulam). From Kulam, the ships reached Zabag (Palembang, capital of the empire of Srīwijaya).⁷⁸ They went onward to Tiūma (a ten-day sail away), Kundrang (Panduranga, in Champa) (ten days), and Sanf (Champa) (again ten days away), whence ships entered a sea called Shankhay; at last, they reached "the island of the Chams," and Guangzhou (Canton) in China, after another one month's sail.⁷⁹ As early as 671, the Chinese pilgrim Yijing, who sojourned six months at Palembang, notes the arrival of 35 "Persian" ships. Ya'qūbī reveals the centrality of Baghdad, "the navel of the earth":

Baghdad is spread on both banks of the Tigris and Euphrates Rivers, and goods and foodstuffs come to it by land and water with the greatest ease, so that every kind of merchandise is completely available, from east and west, from Muslim and Non-Muslim lands. Goods are brought from India, Sind, China, Tibet, the lands of the Turks, the Daylam, the Khazars, the Ethiopians, and others to such an extent that the products of the countries are more plentiful in Baghdad than in the countries from which they come. (Micheau 2000: 108; Garcin 2000: 302; Robertson 2015)

Baghdad hosted many merchants from Khorasan and Transoxiana. It was also home to a sizeable Jewish community who gave rise to the Radhanite merchants who traded from Europe to China. "The relations of Nestorian Christians with Iran and Central Asia must have also favored exchanges" (Garcin 2000: 302).

Ceramics from the Persian Gulf – such as white pottery (Tin White Ware), blue-on-white ware, yellow-enameled white pottery, green pottery with relief decoration, and

⁷⁸ Moreover, a passage in Mas'ūdī seems to refer implicitly to a route linking the Maldives and northern Sumatra: "At a distance of about one thousand farsangs from Serendib is another archipelago called ar-Rāmnī. These islands are well settled, governed by kings and rich in gold mines. In the same sea is Fansur, whence the *fansūrī* camphor has its name" (para. 371, 1962: 138). Further, in the same text (para. 378), Mas'ūdī indicates that ar-Rāmnī – northern Sumatra – was controlled by the "Maharaja" of Srīwijaya. The Arabs even had a sense of the Pacific's immensity: "These islands [Insulindia] border a sea whose limits and extent cannot be reached or known and it is contiguous to the China Sea" (para. 377, 1962: 139) (see also al-Istakhri, tenth century).

⁷⁹ Itinerary given by the *Account of China and India*. Some merchants ventured beyond Canton. Ibn al-Faqīh also gives the itinerary going from Basra to Canton. Ibn Khurdādbēh describes a similar journey, via Daybul. The route between Kalāh and Tiūma (east coast of the Thai–Malay peninsula) is not clearly described in Ibn Khurdādbēh's work (see Tibbetts 1979: 68–71, and fig. 2a and 2b). Sanf Fulaw (Champāpura) may correspond to Tra Kieu. Various seas are listed. According to Ya'qūbī, beyond the Strait of Hormuz, "one enters the sea of Larwi, which contains the islands of Waqwaq and other countries of the Zanj; one can only sail in this sea by guiding oneself by the stars . . . Then one enters the third sea, the sea of Harkand, to the east of the Sirandib island [Sri Lanka], which contains precious stones. The fourth sea is the sea of Kalāh-bar . . . It contains islands on which the camphor tree grows. The fifth sea is called Salāhat, it is a large sea . . . The sixth sea is named Kundrang. The seventh sea is called sea of Shankhay or sea of Kangli. It is the China Sea, on which one can only sail with southerly winds, as far as the mouth of a large river. From there to the city of Khānfū [Canton], the river is lined with military posts. Khānfū is a large city. It is a trading port of China where the ships of the Muslims come and moor" (Ferrand 1913: 49–50). Ya'qūbī also gives the name of Kita' for northern China, which corresponds to the Cathay of Marco Polo; the name derives from the name of the Khitan people (Ferrand 1913: 52). The Harkand Sea probably refers to the Gulf of Bengal, and Salāhat, to the region of the straits (cf. Malay *selat*). Harkand may derive from the name of the kingdom of Harikela, east of the Bengal (Wink 1990).

green-glazed ware, called “Sassano-Islamic” – dot these routes; they reflect the activity of networks not necessarily mentioned in the Arabo-Persian texts (see Glover 2002). Sassano-Islamic pottery was produced in southern Iraq, near Baṣra; it has been found in profusion at Sirāf, and excavated at some Indian sites, in Sri Lanka (Tissamaharama), the Maldives, Southeast Asia, and East Asia. Ho (1994, 1995) and Glover note its presence at ten sites of the Thai/Malay peninsula on the Thai side, two sites in Malaysia, one in Sumatra, four in Vietnam, two in the Philippines, four sites in China and five in Japan (see below).

During this early period, trade between the Persian Gulf and China did not yet show the segmentation that would be the rule from the late ninth century onward: Arabo-Persian ships leaving the western Indian Ocean sailed to eastern Asia, until the time of the massacre of the Muslims at Canton in 879 (Chaudhuri 1985; see below). It is possible, as N. Brown has suggested, that weak monsoons in the Indian Ocean during the ninth and tenth centuries favored these travels by sea.⁸⁰ The reasons for these long journeys, however, were primarily economic and political, linked to the vitality of the Abbasid and Tang empires. The journey from Oman to Canton lasted around 120 days.⁸¹ The return journey may have been slightly shorter. These assessments do not include waiting periods in some ports. The ships stopped in the ports of South India, waiting for favorable winds – but did not unload their merchandise. Indian products were loaded during these stopovers. According to Hourani *et al.* (1995: 74–75), ships would sail down the Persian Gulf in September or October, and left Suḥār or Muscat in November, reaching the Malabar coast in December. They had to wait for January to cross the Bay of Bengal, using the end of the northwest monsoon to sail through the Malacca Strait; then they took advantage of the southern monsoon in the China Sea in order to reach Guangzhou in April or May. The return trip to Malacca and the western coast of India began between October and December. The ships sailed toward the Persian Gulf at the beginning of the southwest monsoon, and arrived in the Gulf by June. These networks were operated by private merchants, who carried glass vessels, rhinoceros horns, ivory, pearls, jewels, perfumes, spices, and medicines to China, and brought back not only silk, but also porcelain and stoneware that was beginning to be produced widely during the eighth century (Rougeulle 1996: 16). From eastern Asia and India, the ships also brought back spices, precious stones, and teak for shipbuilding and housing construction. Sri Lanka exported significant amounts of iron (some authors have estimated the yearly export at 10,000 tons by the eighth century). In the Indian Ocean, the Muslims traded flax, cotton and wool fabrics, carpets, silver, and horses. The Indian Ocean trade was also connected to that of the Mediterranean.

Texts written this early emphasize features that would later become constants in the history of the Indian Ocean and the China Sea: cosmopolitanism was the rule aboard ships and in the port cities, and Muslims enjoyed a growing position in trade. In China,

⁸⁰ Brown 2001: 145–146 (contrary to Brown’s assertion, the seventh and eighth centuries generally were a period of strong monsoons). The powerful summer monsoon winds (northern Indian Ocean) were one of the risks run by the ships: “Mean wind speed [of the southwesterly monsoon] is twice that of the dry north-east monsoon of winter” (Brown 2001: 275).

⁸¹ Quoting Kuwabara, Filesi (1972: 15) falsely states that “the Arab merchants generally took two years to reach China.”

while the authorities did regulate trade, it remained largely in the hands of foreign communities. According to Mas'ūdī, “vessels from Baṣra, Sīrāf, Oman, India, the islands of the Jāvaga [Sriwijaya, and probably Java], Champa and other kingdoms, all met at Canton.” During the eighth century, Muslim Arabs and Persians settled at Canton and other southern Chinese cities as merchants. Jews, Christians, and Zoroastrians were also present in China and in India. Chinese sources report that Canton was sacked in 758 by “Arab” (*dashi*) and “Persian” (*bosi*) pirates (see above). The Nestorians enjoyed relative tolerance under the first caliphs. Based at Ctesiphon, “their patriarch ordained a bishop who was destined to preach in China and created a Tibetan province.” Nestorian Persians were settled in insular Southeast Asia during the seventh century, and perhaps as early as the fifth century (see Volume 1). Nestorian priests are mentioned on the Thai–Malay peninsula during the seventh century and in the Chinese capital in 781.⁸² Mas'ūdī relates the presence of “Muslims, Christians, Jews and Mazdeans” at Canton at the time of the massacre of foreigners in 879. A passage from the book by al-Sīrāfi mentions a vessel in the Melayu Sea sailing toward China with “a crowd of merchants from every country aboard.” A terrible storm struck and “each of [the passengers] prayed according to his religion, for there were men from China, India, Persia, and the islands.”

The same book tells us the exemplary story of the Jew Ishāq:

At first, Ishāq worked with trade commissioners in Oman; a dispute arose between him and another Jew, and he fled to India, with only 200 dinars. Thirty years later, in 300 H. (912/913), he came back from China on his own ship, laden with one million dinars of musk, silks and gems. Rather than having the governor take inventory of the ship's cargo, he agreed to pay one million dirhams to the emir of Oman Aḥmad b. Hilāl, and began to sell his products while providing a discount for large quantities, “a new revolutionary method in the viewpoint of the merchants,” Ishāq's wealth aroused jealousy and animosity. At Baghdad, the Caliph al-Muqtadir was advised to confiscate this fabulous fortune. The caliph sent a black eunuch (called Fulful) to Oman, ordering the emir to apprehend Ishāq and send him to Baghdad. Aḥmad b. Hilāl was thus forced to arrest Ishāq; however, he offered to help him out of this difficult situation “for a substantial sum of money.” Then the emir secretly fomented a strike in the souks and sent a message to Baghdad stating that the merchants in Oman were very concerned about the possible spoliation of one trader of their community, that the situation was tense, and that it would be dangerous to go too far. In addition, one gave 2,000 dinars to Fulful, who agreed to go back to Baghdad without Ishāq. “Outraged,” Ishāq chose to sail back to China. Thus, he made haste to get together all he possessed. He fitted out a ship and left Oman “without leaving a single dirham behind him.” When he reached Sribuza (Sriwijaya), the ruler asked him for 20,000 dinars transit dues, to let him carry on his voyage to Khanfu [Canton]; infuriated by all these exactions, Ishāq refused to pay. The ruler sent men to assassinate him by night, and took his ship and all his property. (Lombard 1990, 11: 28)

⁸² D. Lombard quotes a “letter in Syriac from the Catholicos of Baghdad, Ishoyahb III (d. 657/8), sent to the Metropolitan Bishop of Fārs, Shemon, which sought independence; the Catholicos deplores the schism and points out that these internal discords have led – among other negative effects – to the decline of the Church of India whose jurisdiction extended from the maritime borders of Persia *as far as Kalah*”; this country of Kalah seems to be the tin-rich country of the Thai-Malay peninsula, later described in Arab texts” (Lombard 1990, 11: 29).

“In a few words,” as Lombard notes, “the story tells us the stages of the great Oman-India-Sriwijaya-China trade route; it mentions the main products traded, silk, porcelain, musk, gems, brought back from eastern Asia, and pearls, sold in China; and it lists a set of practices linked to long-distance trade at that time: tithes levied on cargoes arriving in Oman and tolls collected by the king of Sriwijaya in the Malay Strait; the introduction of the practice of discounting large quantities traded into Arabia (a ‘technique’ perhaps in use in more oriental markets); the organization of a false strike by the merchants, in order to put pressure on the central power, and, of course, bribes at various levels and the authorities’ confiscation of too-tempting private wealth, from one end to the other of the Indian Ocean” (Lombard 1990, 11: 28).

By the ninth century, Ibn Khurdābeh (1865: 513) also describes the role played by Jewish Radhanite merchants between the Mediterranean, India and China:

These merchants speak Arabic, Persian, Roman [Greek and Latin], and the Frankish, Spanish, and Slav languages. They journey from West to East, from East to West, partly on land, partly by sea. They transport from the West eunuchs, female slaves, boys, brocade, castor, marten and other furs, and swords. They take ship from Firanja [the Frankish country], on the Western Sea, and make for Farama [Pelusium]. There they load their goods on camel-back and go by land to al-Kolzum [Suez], a distance of twenty-five *farsakhs*. They embark in the East Sea [Red Sea] and sail from al-Kolzum to al-Jar and al-Jeddah, then they go to Sind, India, and China. On their return from China they carry back musk, aloes, camphor, cinnamon, and other products of the Eastern countries to al-Kolzum and bring them back to Farama, where they again embark on the Western Sea. Some make sail for Constantinople to sell their goods to the Romans; others go to the palace of the King of the Franks to place their goods.

Sometimes these Jew merchants, when embarking from the land of the Franks, on the Western Sea, make for Antioch (at the head of the Orontes River); thence by land to al-Jabia (al-Hanaya on the bank of the Euphrates), where they arrive after three days’ march. There they embark on the Euphrates and reach Baghdad, whence they sail down the Tigris, to al-Obolla. From al-Obolla they sail to Oman, Sindh, Hind, and China. The journey, therefore, can be covered without disruption.

These different journeys can also be made by land. The merchants that start from Spain or France go to Sus al-Aksa (in Morocco) and then to Tangier, whence they walk to Kairouan and the capital of Egypt. Thence they go to ar-Ramla, visit Damascus, al-Kufa, Baghdad, and al-Basra, cross Ahvaz, Fars, Kerman, Sind, Hind, and arrive in China.

Sometimes, also, they take the route behind Rome and, passing through the country of the Slavs, arrive at Khamlidj, the capital of the Khazars. They embark on the Jorjan Sea, arrive at Balkh, betake themselves from there across the Oxus, and continue their journey toward Yurt, Toghuzghuz, and from there to China.⁸³

During the tenth and eleventh centuries, in Iraq and Egypt, representatives of Jewish merchant families were established as bankers and tax collectors; thus the bankers Joseph b. Phineas and Aaron b. ’Amran, who were associates in a firm founded during the tenth century, lent money to the caliph and his viziers.⁸⁴ Ibn ’Allan al-Yah

⁸³ The Radhanites also traveled along a north-south axis between Kiev, Itil, and Baghdad.

⁸⁴ These “Jewish bankers of the court collected the taxes of al-Ahwāz; they immediately invested it in their sugar and textile industries and gave the caliph promissory notes to be drawn on their assets in the houses

ūdī (who died in 1079), a tax collector at Baṣra, served the caliphs for more than twenty years and lent money to the well-known minister of the Seljukids, Nizām al-Mulk (see below). Other merchants became suppliers of luxury goods to the palace.

The passage by Ibn Khurdādbēh quoted earlier in this text reveals the significance of the Red Sea, parallel to that of the Persian Gulf. Ibn Khurdādbēh writes: “Aden is one of the main ports of call in this sea. Amber, aloes, musk abound in this port. Aden is the warehouse for goods from Sindh, India, China, Zanj, Abyssinia, Basrah, Djeddah and Kolzoum” (1865: 282). Yemen also exported its own products: “this country exports mainly silks striped and of various colors and other kinds of fabrics, ambergris, wars (Arabian saffron) and gums” (1865: 294–295).

The importance of the merchants in a Muslim world which was both supranational and multiethnic appears clearly in the adventures of Sindbad the Sailor, written as early as the ninth or tenth century, and the tales of the *Thousand and One Nights*, probably written during the twelfth century (Khawam 1986, 1: 26);⁸⁵ these merchants were not only traders, but also diplomats, spies, and geographers. In addition to the merchants, men of religion and scholars also traveled extensively within the Muslim world and beyond. The geographer al-Ya‘qūbī, for example, spent his youth in Armenia; he left for Persia, and later traveled to India before settling in Egypt, where he died at the end of the ninth or during the early tenth century (Lewicki 1974).

Alongside economic prosperity, the first Abbasid period was marked by a brilliant intellectual life. The caliph al-Ma’mūn, in particular, founded the “House of Wisdom,” and many Greek philosophical and scientific works were translated during his reign (Nestorian Christians and Jews were crucial to this Greek knowledge transfer). Al-Ma’mūn adopted Mu‘tazila, a school that used the powers of reason as a source of religious knowledge. It would be erroneous, however, to consider al-Ma’mūn as the initiator of the process of translation. As pointed out above, according to G. Saliba, this process started at the time of Abd al-Malik, and was conducted alongside statebuilding. Many texts were still being translated under the reign of al-Mutawakkil (847–861), who was nonetheless hostile toward the Mu‘tazilis. These translations were accomplished by court officials such as the three sons of the Persian astronomer Mūsā ibn Shākir, who was al-Ma’mūn’s adviser, or by Hunain ibn Ishāq, al-Mutawakkil’s physician (Saliba 2007: 61). A strong scientific background was indeed necessary for bureaucrats who were willing to rise in the official hierarchy of the empire.

There was not only translation, but also “appropriation” of texts, by scholars who already possessed considerable scientific backgrounds. Thus, al-Ḥajjāj bin Matār (c. 830), who translated Euclid’s *Elements* and Ptolemy’s *Almagest*, corrected errors in Ptolemy’s text (Saliba 2007: 17). The mathematical works by al-Khwārizmī – “the Father of

of Baghdad. These *jabbādh(s)* thus ensured the funds’ mobility by a series of accounting entries between the provinces and the treasury of the caliph” (Lombard 1971: 169). They managed both public and private deposits (Fischel 1933; Labib, 1969: 84). The function of *jabbādh*, official banker-changer, was borrowed from the Sassanids, and developed by the Abbasids, who set it up as a “ministry” (*diwan*) (Bogaert 1966: 162).

⁸⁵ Galland worked on a manuscript that dates back to the mid-thirteenth century.

Algebra” – and by Ḥabash al-Hāsib (c. 830) “go far beyond what was known from the Indian and the Greek sources” (Saliba 2007: 18). Indian texts dealing with astronomy and mathematics were also translated from Sanskrit into Arabic.⁸⁶ It is likely that the mathematician and astronomer al-Battānī, who introduced the use of sines in calculation, as well as the concept of tangents, was aware of Indian texts; he is also known for his calculation of the values of the precession of the equinoxes and the obliquity of the ecliptic. Through trade movements and military encounters, the Arabs established contacts with Chinese science. As previously noted, this had a significant influence on the works of Jābir ibn al-Hayyān (Geber) (721–815) in alchemy. Geber, discoverer of nitric acid and hydrochloric acid, “insisted that knowledge must be gained by experiment and that experiment must be used for practical work” (Goldstone 2008: 139). At the same time, the Muslim Empire triggered overall progress and the dissemination of knowledge. Besides mosque schools, which taught religion, private higher-educational institutions developed, financed by the state and by private donors: here the secular sciences were sometimes taught. Universities were founded: al-Qarawiyyin at Fez in 859, and al-Azhar in Cairo in 988, although these did not have the autonomy later enjoyed by medieval European universities. Widespread paper production rendered the writing of many manuscripts possible. Public and private libraries flourished. A House of Wisdom, founded in Cairo during the tenth century, held as many as 2 million volumes; the library of the Umayyad caliph of Spain al-Hakam housed 400 000 manuscripts. Several of the most well-known names in philosophy belong to this first period of Islam, including al-Kindī (796–873) and al-Farabī (872–950) (Avicenna’s teacher), who sought to reconcile Aristotelianism with Neo-Platonism, and attempted to use reason in support of religious faith. Both of these philosophers lived at Baghdad. Al-Razī (Rhazes), a physician, alchemist, and philosopher from Khorasan (880–923), who probably benefited from knowledge from China, also sought out evidence based on experimentation (Needham *et al.* 2000: 124). To an even greater degree than the Roman Empire at the beginning of the millennium, the Muslim Empire gave rise to the spread and synthesis of various technologies, and the development of new knowledge.⁸⁷ The historian Tabarī wrote a universal history entitled *History of the Prophets and Kings*. Muslim scholars created the first international scientific community. Astronomy (and astrology) thus developed from five traditions: Greek, primarily, but also Indian, Persian, Syriac, and Babylonian. Astronomers perfected Greek instruments (the armillary sphere, spherical

⁸⁶ An Indian astronomer named Sindhind arrived in Baghdad in 773, with a book for which the caliph al-Manṣūr authorized a translation into Arabic (Djebbar 2001: 162). According to Beckwith (2011: 153), the Barmakid viziers helped bring the Indian sciences to Baghdad. Some of the translations from this period, as well as translations of Indian medical books, would later be passed on to Europe. Persian works were also translated at the time of al-Manṣūr. In addition, Adshead (2004: 164) advances the idea of a Buddhist influence from Central Asia on the madrasa, the Islamic college, or on currents of thought such as the Mu‘tazili school, whose theology speaks of “the freedom and the moral responsibility of man” (Bianquis 2000: 8) (on the Central Asian origin of the madrasa, see also Wink 1990: 43).

⁸⁷ The “centrality of Islam,” though genuine, has been overestimated by Burke (2009a), who analyzed the “standardization” of technological complexes in the Muslim world. Burke also failed to recognize China’s preeminence in ongoing global processes, as well as the importance of the Sassanid (and Byzantine) heritage, with regard to the system of credit.

astrolabe, and planispheric astrolabe)⁸⁸ and invented new instruments in order to observe planets and stars and to solve mathematical problems.⁸⁹ In the secular sciences, however, the Muslim world was less interested in theoretical domains than in their utilitarian aspects.

Decline during the Second Half of the Ninth Century and the Tenth Century

The situation of the empire deteriorated during the ninth century, a period of financial crisis and fresh outbreaks of Shiite disputes that crystallized the discontent of the impoverished urban classes and the peasantry. Everywhere, provincial emirs were distancing themselves from the caliph's authority. The empire was disaggregating in both the west and the east. In Africa, the political decline of the Abbasids was apparent as early as the late eighth century. In 789, the Idrissids of Morocco founded an independent Shiite emirate, and established its capital at Fez, in 809. From 800, the Aghlabids of Ifriqiya (Tunisia) formed an emirate centered on Kairouan; they recognized the suzerainty of the Abbasid caliphs only nominally. Sicily came under Muslim control (Aghlabid) from 827 to 878 (with the captures of Palermo and Syracuse), but this Muslim advance was an exception: in fact, the dislocation of the caliphate accelerated during the second half of the ninth century. In Yemen, the governor Ibn Ziyād proclaimed his independence in 820, and chose Zabīd as his capital. Egypt and Palestine became autonomous under the rule of the Tulunids (868–905): the governor of Egypt kept for himself the taxes that had previously been sent to the caliph, and recruited an army. An increasing number of migrants settled in the Nile valley, notably scholars from Iraq. Central Asia and most of Persia escaped Abbasid rule when the (Shiite) Saffarid and (Sunni) Samanid emirates became independent, in 867 and 874, respectively.⁹⁰ The Christians in Armenia regained their independence in 886. The Abbasids lost a large part of Arabia. A Zaydi emirate (Shiite) formed in North Yemen (in 868). In eastern Arabia, Qarmatians created an independent state on Bahrain (894–1076) that threatened the Abbasid caliphate

⁸⁸ The astrolabe made it possible to solve various problems in astronomy and astrology, and to take geographical measurements and calculate time. For a description of the “basic” astrolabe, see Turner 1997: 88–90. The astrolabe also made it possible to measure latitude from the height of the pole star and provided timekeeping data, including the determination of prayer times.

⁸⁹ These inventions include the “sine quadrant,” which was used “to solve numerical or trigonometrical problems, in particular to determine the direction of Mecca,” and various types of horary quadrants (Djebbar 2001: 175). The astrolabe quadrant may have been developed in Egypt by the eleventh century.

⁹⁰ The Sāmānids took the Saffārid emirate by 901; they founded their long-distance trade on the exploitation of the silver mines of Afghanistan and the export of slaves from the steppes. At their peak, the Sāmānids reigned over the Khorasan, the Khwarezm, and the oasis of Māwarāʾ an-Nahr, which controlled the routes towards China. This Sāmānid dynasty persianized the bureaucracy, and promoted a Perso-Islamic culture (Wink 1990: 21). This dynasty appears to have fallen into decline during the late tenth century, when the Qarakhanid Turks – in part of Qarluq origin, and converted to Islam – seized Sogdiana. The Samanids were later defeated near Merv by the Turk Maḥmūd of Ghazni. Khorasan and Transoxiana were then divided between Qarakhanids and Ghaznavids.

and dominated the coast as far as Oman.⁹¹ Even the true core of the empire was in decline: “the Sawad [southern Mesopotamia] had generated 100 million dirhams a year in revenue under the early Abbasids, but this fell to a mere 30 million a year under al-Muqtadir in 918” (Findlay and O’Rourke 2007: 19). It was during these troubled times that the conservative Hanbali school developed, rejecting both Mu’tazili rationalism and Sufi mysticism.

M. Lombard has correctly emphasized (1971) that the economic success of the Muslim world masked its fragility, mostly due to a lack of resources. It was necessary to import wood, from India, western Europe, Armenia, and East Africa. Gold came from Asia (the Caucasus, the Urals, Altai, and Turkestan) and Africa (Nubia, and more importantly from western Sudan and Zimbabwe).⁹² Iron was imported (metal, swords) from India and Europe. While the Muslim world had enough copper (from Central Asia, Upper Mesopotamia, Morocco, and Spain), tin had to be transported from the Thai–Malay peninsula or acquired from the British Isles. The lack of water and widespread use of servile labor were other weak features of the empire. “The economic power of Islam depended on – at least – maintaining the irrigation systems, road networks, and importing gold,” and on the prosperity of cities and trade (Lombard 1971: 222), that is to say on fragile balances, which broke down during the ninth century.

The fragility of the Muslim Empire was also political: the state was weakly bureaucratized, and the center benefited only to some extent from the taxes collected in the increasingly autonomous provinces during the ninth century: the caliph was no longer able to maintain an imperial army (Bianquis 2000: 59, 73). While Bianquis notes that the powers in place do not appear to have been “very much concerned with planning” (2000: 69), this was primarily because they no longer had the means to plan policy.

During the late ninth and early tenth centuries, Muslim western Asia erupted in turmoil, and was affected by famines and epidemics. Revolts broke out in Iraq between 813 and 833, and between 869 and 883 involving the Zott (Jat), from the lower Indus valley, who had been deported to Lower Mesopotamia,⁹³ and later the Zanj slaves (partly of African origin),⁹⁴ who were employed mostly on agricultural lands developed

⁹¹ The Qarmatians were the followers of a politico-religious movement of Ismaeli origin. They took Baṣra in 913 and nearly controlled Baghdad. In 930, they looted Mecca and took away the Black Stone for twenty years.

⁹² Silver was exploited in the empire on a band stretching from northern Iran to Kabul, and in Spain. This metal was imported in significant quantities into Egypt. It seems that there was a sudden surge in gold imports in Persia and Iraq during the ninth century. “In the budget for the year 874, Iraq’s revenue is still listed in silver dirhems, whereas in the budget for 915 it is listed in gold dinars” (Ashtor 1972: 559). Gold may have come from Central Asia, and also from western Sudan and Zimbabwe. One notes “an intensive circulation of gold coins” at this time (Ashtor 1972).

⁹³ Lombard 1971: 172. Some were transferred from Baṣra to Syria as early as 670. New deportations from Sind to lower Mesopotamia and Syria occurred during the eighth century (Wink 1990: 157). As noted above, Zott had already arrived in Persia and in Mesopotamia under the Sassanid king Bahram V (see Volume 1). Some of the European gypsies may have come from the Zott.

⁹⁴ Popovic (1976: 164) has rightly pointed out the heterogeneous character of the “Zanj” army; certainly, not all the black slaves came from East Africa; see also Sheriff 2005: 16, 18, citing al-Ṭabarī 1991: 38, 43. The vagueness of the term “Zanj,” however, has been exaggerated. For example, Mas’ūdī, like other authors, makes a clear distinction between the country of the “Abyssinians” (Habshi) and the country of

by rich owners.⁹⁵ Upheavals occurred in Syria and Iraq between 901 and 906, mainly led by Shiites, who dominated the tenth century, described by L. Massignon as the “Ismaili century” of Islam. Ismailism was a Shiite movement which recognized Ismail, who died in 762, as the seventh and last imam. Shiite caliphates appeared in 910 in the Maghreb and in 929 in Spain. Ismaili Shiites, the Fatimids, took power in Tunisia, and later settled in Egypt in 969: the Fatimid general Jawhar entered Fustāt without any fighting, and took Damascus in 970. The caliph al-Mu‘izz settled in the new city of Cairo in 973. The Zaydis ruled western Arabia and northern Yemen,⁹⁶ and Qarmatians controlled eastern Arabia. Baghdad experienced a series of disorders during the first half of the tenth century. In addition to ideological contexts, these revolts were linked to financial problems, power struggles, and the impoverishment of the countryside, under the rule of more or less independent governors (Popovic 1976: 67). The crisis was obviously linked to the overextension of the empire during the ninth century, with the halt in military conquests leading to “higher levels of extraction of the domestic economic surplus” (Ayubi 2008: 78). Climatic conditions (aridity, irregular rainfall) aggravated negative internal trends as well as ecological problems such as salinization and a rise in land level due to silting (Brown 2001: 192). It is also likely that excessive urbanization contributed to the imbalance between cities and the countryside (Guichard 2000). Famines and epidemics were mentioned in Seistan in 836, Syria, Iraq, and Egypt in 939, at Baghdad in 944–945, and in Egypt again in 967.⁹⁷

The caliphates characterized Islamic power during its first phase, associating the political and religious domains. Between the tenth and twelfth centuries, the caliphates were partly replaced by aristocratic powers. In the mid-tenth century, the Abbasid caliphs abandoned most of their prerogatives to emirs; these were the Buyids, of Shiite allegiance. The Buyids dominated Mesopotamia and Persia from 945 to 1055. The central power now became strongly militarized, and high army officers misappropriated the state’s tax revenues, through financial control and later the *iqṭāʿ* system (an *iqṭāʿ* was a fiscal fief granted to an army officer). Developed by the Seljukids in western Asia, and the Ayyūbids in Egypt (Bianquis 2000), this system was efficient on

the Zanj. The Zanj were employed in agriculture, in the army, and as domestic servants. Al-Ṭabarī mentions 15,000 Zanj slaves working as navvies on lands in lower Mesopotamia. In 749/750, a government army corps of 4,000 Zanj was charged with fighting an uprising of the inhabitants of al-Mawsil (Popovic 1976: 63–65). After the rebellion, some of the slaves fled to Bahrain, which was described as having 6,000 Zanj soldiers (Sherif 2005: 19).

⁹⁵ The chief of the Zanj rebels, ‘Alī ibn Muḥammad, posed as both Shiite and Khārijite (although the Khārijites were the enemies of the Shiites) (a Khārijite formula was inscribed on his flag and on his coins): “This tendency to embrace different doctrines became a powerful political means of supporting the revolt” (Popovic 1976: 179).

⁹⁶ The grandson of al-Ḥusayn, and great-grandson of ‘Alī, Zayd was the fifth imam in the mosque of Kūfa, where he was put to death. The Zaydites, who were the enemies of the Umayyad caliphs, formed a Shiite movement which did not adopt heterodox doctrines on the qualities of the imam; they did, however, instigate many armed revolts during the eighth and ninth centuries. They built two independent dynasties, in Tabaristan (Iran, between the Caspian Sea and the Alborz Mountains) and in northern Yemen (where an imamate was instituted in 897).

⁹⁷ Curiously, according to Butzer (1995: 136), Egypt benefited from high Nile flooding “around 800–1000”; however, Quinn (1992) contradicts this (see below). See also Fagan 2009: 126.

a military level, but not an incentive for agricultural progress, at least under its non-hereditary form.⁹⁸ It has been noted that the *iqṭāʿ* system developed precisely when the number of slaves employed in agriculture was diminishing (Bausani 1971: 88); however, it remains the sign – and a cause – of a weakening of the central state. This “creation of an artificial aristocracy from deracinated elements” was unique to the western Muslim world (Wink 1990: 15).

The difficulties experienced along the Central Asian routes during the tenth century should have benefited trade in the Persian Gulf,⁹⁹ but the disorders plaguing western Asia and southern Iran during this century, as well as the destruction of the port of Sīrāf by an earthquake in 977¹⁰⁰ and the emergence of the Fatimids in Egypt, all led instead to a restructuring of the Persian networks and a relative preeminence of the Red Sea over the Persian Gulf.¹⁰¹ During this period of fragmentation of the Muslim Empire – even prior to the Fatimids’ arrival in Egypt – Yemen and the Red Sea saw their influence increase.¹⁰² The presence of a Shiite power in Yemen spurred trade between Fatimid Egypt and India, where Ismaeli communities began to form (Garcin 2000: 302). Egypt’s situation, however, was difficult during the ninth and tenth centuries. The country experienced frequent low Nile floods that affected agricultural production.¹⁰³ Famines occurred, especially in 939. While the situation had improved by the end of the tenth century, navigating the approaches of the Red Sea was far from safe at this time. During the tenth century, Socotra was a den of Indian pirates: “[The island] is now a port of call for Indian ships (*baraja*) that give chase to Arab ships sailing to India and China” (Masʿūdī 1965: 332). Tabarī describes Indian attacks on the island of Dahlak at an earlier point in time.

The formation of the Muslim Empire was a major event in the world-system’s second phase. While it left its mark on western Asia, Central Asia, northern Africa, and Europe, it appears to have touched the Indian subcontinent only marginally, as this area was more east- than west-oriented, as had been the case during the world-system’s

⁹⁸ Guichard (2000: 189, 196) thus offers a rather negative picture of the *iqṭāʿ* system, which “led to the sacrifice of long-term [socioeconomic] development in favor of immediate profit.” Cf. also Shatzmiller 2000: 215.

⁹⁹ Masʿūdī, however, mentions a merchant from Balkh who traveled to China several times via the Silk Roads. In order to sell his wares in China, a merchant from Samarkand preferred to travel by sea.

¹⁰⁰ The port of Sīrāf remained significant under the Buyids during the tenth century, as seen in the minting of silver coins at Sīrāf between 934 and 992: this reflects the maritime interest of the Buyids at the time. The decline of Sīrāf was also linked to the rise of Qays, near the mouth of the Gulf. Ibn al-Balkhi writes in 1110 that when the ancestors of the ruler of Qays gained power, “consequently, the revenue formerly taken by Siraf was cut off and fell into the hands of the Amir of Kish [Qays]” (Chakravarti 2012: 79).

¹⁰¹ This restructuring thus occurred earlier than M. N. Pearson suggests (2000: 47): Pearson places it during the thirteenth century, after Baghdad was looted by the Mongols. It is true, however, that the Persian Gulf retained its importance throughout the eleventh and twelfth centuries.

¹⁰² While we have little precise data on the significance of the Red Sea in trade networks of the Indian Ocean prior to the tenth and eleventh centuries, as Rougeulle points out (1996: 166), travelers do mention Aden as a major port as early as the ninth century. A few Chinese ceramic items have been excavated at Fuṣṭāt in pre-Fatimid levels. By 1000, “for the people of Basra, the Persians of Fāris and the South Arabians were the best traders among the believers, and had their colonies wherever anything could be produced” (Mez 1922: 448, quoted by Labib 1969: 90).

¹⁰³ Quinn (1992) lists 28 and 25 instances of low Nile flooding during the ninth and tenth centuries, respectively.

first phase. Because India was divided up among various agrarian powers who were fighting one another for economic and political supremacy, it no longer enjoyed the influence it had had in bygone centuries, although the great Buddhist centers were still attracting pilgrims and merchants from China, Southeast Asia, and Central Asia. This said, the situation of the Indian subcontinent, including that of northern India, was not undergoing the serious decline historians too often portray.

The greatest king of India in our times is the Ballahra, the lord [Rāshtrakūta] of el-Mankir [Mānyakheta]. The most kings of India turn, in their prayers, and they pray for his messengers, when they receive them . . . His troops and elephants are innumerable.

At some distance from him is the territory of Barudah,¹ who resides in the town of el-Kinnauj [Kanauj] [the Gurjara-Pratihara Empire]. [Barudah] is the name of every sovereign who rules over this country.

Beyond this kingdom is that of Rahma [the Pala Empire]. His dominions border on those of the king of the Khazars² and, on one side, those of el-Ballahra, with whom he is frequently at war.³ Rahma has more troops, elephants and horses than the Ballahra, the king of el-Khazar and [the king] of et-Takin.⁴

On one side, [the Ballahra] is exposed to the inroads of the king of the Khazar,⁵ who possesses a great number of horses, camels and troops, and they believe that there is no king on earth more glorious than he, except the king of the climate of Babel, which is the fourth climate. For this king surpasses in magnificence and valor all other kings of the world. The Ballahra has a great animosity against the Moslems.⁶

He has a number of elephants. His dominions occupy a tongue of land, and are so rich in mines of gold and silver, that gold and silver are the medium of his commerce. (Mas'ūdī, VII, 177, 178, XVI, 380, 389, 390)

Following the disaggregation of the Gupta Empire during the sixth century, political confusion prevailed in part of the Indian subcontinent. Declining trade with Central Asia and the West, along with a decrease in the volume of internal as well as external trade, led to an impoverishment of northern India. The situation in South Asia has often been inappropriately compared to that of western Europe at the time, marked by social changes, diminishing resources, de-urbanization, decreasing monetization,⁷ and disrupted

¹ In other parts of the text, the name reads “Būdah.” The French translation by Barbier de Meynard and Pavet de Courteille has “Baourah.” This name refers to the kings called Bhoja (Bhoja I and Bhoja II).

² The French translation has “Guzerat,” for Gurjara.

³ The English translation of this passage is incorrect. The Pala kingdom is at war with the Gurjara-Pratihara. This has been correctly translated in the French text.

⁴ In the French translation, we read *le prince de Guzerat et celui de Tafen*.

⁵ In the French translation: “Djozr (Guzerat);” in fact, this refers to the Gurjara.

⁶ Mas'ūdī's interpretation is wrong: the king of the Gurjara-Pratihara was the enemy of the Muslims.

⁷ For Sharma (2000: 375), the use of money diminished during the four centuries following the Gupta period, paralleling a decline in external trade. Sharma also notes an increase in interest rates on loans. Arab geographers, however, mention the use of money in the various kingdoms during the ninth and tenth centuries.

communications (Digby 1982a: 45).⁸ Invasions from Central Asia and the closing of the Silk Roads to northwestern India were partially responsible for this downturn, whose significance, however, has been greatly overestimated. The theses proposed by Sharma and other authors concerning India's de-urbanization, demonetization, and general decline in trade have been challenged, particularly for the eighth century and the ensuing period (Subrahmanyam 1994a: 12ff.; Chakravarti 2001a; Stein 2002). The downturn in trade affected mostly inland regions, especially in northern India. While some cities were in sharp decline – Xuanzang mentions Kaushāmbī, Shrāvastī, and Vaisali – Chakravarti (2001a) emphasizes that Chirand, Vārānasī, Ahichchhatra, Purana Qila, in the Ganges valley, and Ahar and Ujjain, in Malwa (western Madhya Pradesh), showed continuity in settlements at this time. In northern India, new towns even appeared, such as Prthūdaka (Haryana), Tattānandapura, Sīyāduni, and Gopātri (Gwalior). The coastal areas of Gujarat, Konkan, Kerala, Bengal, and Coromandel remained embedded in the trade networks of the Indian Ocean, expanding with the emergence of Islam.⁹ The Hindu prejudice against participation in overseas trade had little impact on these regions, and eastern India would take an active part in the “indianization” of Southeast Asia. The use of cowries (Orissa, Bengal, and the Ganges valley) reveals maritime links with the Maldives.¹⁰ The political fragmentation of this period corresponds to a process of regionalization; contrary to what advocates of an “Indian feudalism” have written, such fragmentation does not reflect a disintegration of the states.

From the eighth century onward, four large areas grew into major political powers: northern India (Ganges), Deccan, Bengal, the eastern coast, and South India. Their development was based upon the cultivation of rich valleys and control over trade routes. Land grants to Brahmins¹¹ who formed *brahmadēya* estates, the construction of water tanks, and the digging of irrigation channels all led to advances in agriculture in various regions, with the agricultural products being consumed on site or sold on the market. The Brahmins were often associated with temples and involved in their administration. Moreover, land grants brought a class of new rural landowners into being.

⁸ The fifth, sixth, and ensuing centuries, however, saw progress in astronomy and mathematics, with Āryabhata I (who worked in the Patna region during the early sixth century) and Brahmagupta (seventh century); this may be partly due to Buddhist contacts between China and India. Like the Chinese, the Indians used a positional decimal system. Prior to the seventh century, they may already have had a sign for zero, since this sign has been found on inscriptions in Cambodia (683) and Sumatra (Bangka Island) (686). The contribution from the Chinese, here, remains controversial. As early as the fourth century BCE, zero was “represented” by an empty space in Chinese counting rods. But a written sign for zero did not appear in China until the twelfth or thirteenth century; “it has been suggested that the zero had come from India by the ninth century” (Ronan 1988: 215). Exchanges of knowledge between India and China, in mathematics and in other fields, occurred reciprocally. Negative numbers used by the Chinese as early as the second century CE had appeared in India by the seventh century.

⁹ Chakravarti 2004: 307. Adshead (2004: 95) notes that India lost its monopoly over sugar and cotton during this period. In fact, India (especially Gujarat and Bengal) remained the largest producer and exporter of cotton fabrics.

¹⁰ Xuanzang reports the use of cowries (probably in Orissa) around 640. Mas'ūdi reports this as well, during the tenth century. See Deyell 2001: 409–410.

¹¹ These donations were made by the king or by local chiefs (Stein 2002). Sharma (1958) has stated that these donations to Brahmins, allowing the emergence of a class of landowners, were a distinctive feature of “Indian feudalism” (see below). Grants to officials and vassals are also mentioned – from the early second millennium onward, according to Sharma, but these were in fact already present under Harsha.

The emergence of powerful dynasties during the eighth and ninth centuries led to multiple interregional conflicts. The setting up of large armies, including mercenaries and allied troops, may have been partly responsible for the global weakening of Indian powers at this time. The Brahmins now began to play an important role, not only in the religious field, but also in the economic and political domains, as administrators, members of royal councils, and writers of royal genealogies. The fact that the Brahmins were educated favored their involvement in state and temple administration. Along with the increasing number of kingdoms, one observes a movement of Brahmins into various regions: Maharashtra, Bengal, Orissa, and South India (Singh 2008: 574). The regionalization process and the Brahmins' social status pushed the caste system further into tribal societies, as did the hinduization of tribal chiefs, while local divinities became incorporated into elite-sponsored Hindu devotional cults (*bhakti*), particularly in South India (Stein 2002).¹² Linked to these cults, the texts of the *Purāṇa*, which usually feature one particular divinity, were written from the fourth–fifth century onward (Thapar 2004). The development of *bhakti* cults, primarily in Tamil Nadu, may have been in response to the Brahmanic revival founded on Vedic thought, and may have marked a desire for a degree of social mobility.¹³ Influenced by ancient fertility rites, esoteric cults that were open to women (called *tantric*, from the Sanskrit *tantra*, “weave, doctrine”) developed at this time, focusing worship upon the cosmic energy *śakti*, symbolized by the consorts of the divinities (Varenne 1997). Already in place as of the mid-first millennium, these cults to female divinities, the wives of masculine gods, can be viewed as providing a “counterpoint to subordinating women in society” (Thapar 2004: 318). “Economic growth [and political integration] fostered a vernacular elite community . . . and *bhakti* cults instilled pride in regional cultures,” thus fostering the fusion we observe during the early second millennium between power and culture (Pollock’s “vernacular revolution” [2006], which first occurred in the Tamil country and the Deccan) (Lieberman 2009: 721–722). *Bhakti* cults later spread to northern India, “in reverse to Sanskrit north-to-south transmission. [They] proved critical to religious integration, both vertical and horizontal, favoring the emergence of a pan-Indian religious synthesis” (Lieberman 2009: 665). During the late first millennium, Vajrayāna Buddhism, often named Tantric Buddhism, flourished, with Shaivite influences. Moreover, in contrast to the *bhakti* cults, a tendency toward increasing formalization in religious law led to the writing of various texts (*dharmaśāstra*). At the same time, philosophers such as Shankara (eighth–ninth century) were helping to renew Hindu thought. Many temples were

¹² The poetry of love and devotion accompanying these cults may have had “a long gestation period” going back to the Sangam poems of love (Thapar 2004: 351).

¹³ The *bhakti* cults express a rejection of ritual sacrifices and of traditional Brahmanic knowledge. New rituals replaced the ancient Vedic sacrifices. Among the Shaivite and Vishnuist poets and saints (*Nayanar* and *Alvar*) were people of all castes, including untouchables. U. Singh notes that “although the leadership [of the *bhakti* cults] was dominated by elite groups, especially Brahmanas, [at the same time, these cults] did create a religious community within which traditional social distinctions could be transcended” (2008: 619). To some extent, the temple became the locus of the attempt “to integrate the two levels of religion – the Brahmanical and the devotional movement – through rituals and functions” (Thapar 2004: 357). The untouchables and certain castes (tanners and potters), however, were not permitted to enter the temples.

built, and these had an integrative function within the various political entities and played a significant role in trade. These temples often served as nuclei for urban centers. Hinduism “incorporated many doctrinal and organizational features of latter-day Buddhism” (Wink 1990: 228). Hindu “monasteries” (*matha*) were created; these were accommodation centers, providing medical treatments and teaching. Significant literary productions – written in various local languages – accompanied these social and religious transformations. This period saw a decline in Buddhism and Jainism, especially in South India (Buddhism, however, remained a force in Kashmir and north-eastern India) (perhaps, as Wink argues [1997: 6], Buddhism had never truly become entrenched in Indian peasant societies).¹⁴ The at-times fierce antagonism between the Shaivites on the one hand, and the Jains and Buddhists on the other, is clearly visible in later texts; the Jains appear to have been persecuted, particularly at Madurai (Stein 2002: 130).

Northern India: The Gurjara-Pratihāra

During the first half of the eighth century, an empire formed once again in northern India, this one ruled by King Harsha, who favored Buddhism. The Chinese pilgrim Xuanzang sojourned for eight years (of the thirteen he spent in India) in Harsha’s kingdom. Xuanzang pointed out the significance of the concept of impurity: “Butchers, fishermen, theatrical performers, executioners and scavengers were forced to live outside the city, and their houses were marked, so that they could be avoided” (Thapar 2004: 303). During the fifth century, Faxian had already stated that “untouchables had to sound a clapper in the streets of the town so that people were warned of their presence” (Thapar 2004: 303). Harsha’s empire, whose capital was at Kanauj, extended from Punjab to the north of Orissa, and from the Himalayas to the Narmada River: it was thus open to the Indian Ocean on both its east and west sides. For Kulke and Rothermund (2004: 128), the state’s rather decentralized structure was different from that of the Gupta Empire. The central part of the empire remained quite large, but whereas the Gupta had appointed governors and district officers – in Magadha and Bengal for example – there were now *mahāsāmanta* princes (“great *sāmanta*”) or *mahārāja*, “who enjoyed great autonomy.”¹⁵ Moreover, assignments of land to officers led to a process of “samantization” (Kulke and Rothermund 2004: 130).¹⁶ Beyond the

¹⁴ Along long-distance trade networks, it is possible that the increasing presence of Muslim merchants triggered the decline of Buddhism, as Wink suggests, although we do not have much evidence for conversions of Buddhists to Islam; in fact, Buddhism had begun its decline in India during the centuries preceding the rise of Islam (Wink 1990: 227; 1997: 348). Thapar links the decline of Buddhism to that of a merchant class during the post-Gupta period. The development of Hinduism, the growing role of Brahmins, and the support the Brahmins gained from political rulers obviously played an important part in the Buddhist decline.

¹⁵ H. Kulke (1995: 247–248) notes that the meaning of the term *sāmanta* changed around the seventh century, from (independent) “neighbor prince” to “tributary prince.” The increasing power of the *sāmanta* and their desire for independence were likely to have led to a political fragmentation of the empire. Kulke and Rothermund quote an inscription dated to 632 found near Vārāṇasī. However, “governors of province” (*uparika*) are mentioned in this inscription.

¹⁶ Heitzman (1997: 14), however, points out that after 600, there are few inscriptions in India referring to land grants for “secular’ services.”

core, vassal kings *mahāsāmanta* paid tribute and provided military assistance to an emperor who called himself “universal ruler” (*chakravartin*, “the one who turns the wheel [of *Dharma*]”).

“Affairs of state,” Xuanzang writes, “are not very complicated. Families are not registered in civil books. Income from crown lands is divided into four parts. The first is used for the expenses of the kingdom and provides grain for sacrifices; the second is used for providing grants to ministers and members of the State Council; the third is used for rewarding men who stand out with their intelligence, their knowledge and their talent; the fourth is used for cultivating the field of happiness, and for giving alms to various heretic sects.” (Lévy 1995: 179–180)

After Harsha’s death, the empire disaggregated, but Kanauj became the capital of another sizeable and short-lived kingdom, ruled by Lalitaditya, king of Kashmir, who defeated the Arabs who had conquered Sindh and part of the Punjab after the city of Daybul was captured in 711. Kanauj would later become the capital of the Gurjara-Pratihāra from Rajasthan and Madhya Pradesh,¹⁷ when they seized the city, under King Nagabhata II’s reign (805–833). Kanauj and its region would be the focus of endless wars among three powers: the Gurjara-Pratihāra, the Pāla, and the Rāshtrakūta. After King Bhoja’s reign (836–882), the Gurjara-Pratihāra were forced to retreat due to the rising power of the Pāla; however, the Gurjara-Pratihāra still controlled most of northern India during the second half of the ninth century and the early tenth century, thus preventing Islam from spreading outward from the Sindh region. At certain times, the Gurjara-Pratihāra managed to take control of Rajasthan and Gujarat. King Nagabhata rebuilt the temple of Somanath devoted to Shiva, which had been partly destroyed during a Muslim raid. The Buddhist pilgrims and merchants continued to travel between China and India, where they may have introduced paper manufacturing techniques during the seventh century.¹⁸

In northern India as well as in the rest of the subcontinent, this period saw increased donations to religious institutions (such as land grants and rights over village income). These donations were recorded via the issuance of copper-plate charters. These grants and the rights linked to them spurred agricultural development and the integration of kingdom territory, and not the political decay that some have put forward.¹⁹ Capitals were sacred centers, where large temples were built (a phenomenon that would become more prevalent as of 1000 CE); while at the same time, kingdoms were attempting to integrate local cults. Although “[inscriptions] deal primarily with the agrarian sector,” they do yield the names of several types of merchants and marketplaces of various sizes,

¹⁷ Wink (1997: 171–172) gives a distant Central Asian origin for the Gurjara-Pratihāra, as well as for other Rajput clans that dominated northern India from the tenth century onward (Paramāra, Chalukya from Gujarat, Chāhamāna, and perhaps Tomara). The origin of these various groups, however, remains uncertain.

¹⁸ While Buddhism played a role in the transmission of xylography, the Indians printed only images of Buddha – no written texts (Needham 1985: 149). Habib (1982b: 81) believes that paper was introduced later (during the thirteenth century, by Muslims, in the Delhi sultanate) (see also Bloom 2001: 41).

¹⁹ See Kulke 1995: 237ff. In addition, Kulke (1995: 240) notes the promotion of more intensive agricultural practices (especially through irrigation) by some political rulers, for example in the Chola country and in Orissa by the end of the sixth century.

and they contain many references to guilds (Chakravarti 2001a: 80).²⁰ Even in northern India, trade was not as moribund as some authors have suggested. Four regions issued silver (alloyed with copper) and copper coins, which – curiously – mentioned no name: these regions were the Ganges plain (dominated by the Gurjara); Kashmir; the Indus valley (ruled by Arab principalities); and Gandhara and northwestern India (under the Shāhī dynasties). For Deyell, “the volume of exchange transactions *ca.* AD 600–1000 was probably higher than that of the Gupta period” (2001: 411). During the early eleventh century, based on the testimony of Ghaznavid merchants, al-Bīrūnī recounts the existence of trade routes linking various towns in the Ganges valley and the coastal ports. Deyell emphasizes the continuous use of coins in the Gurjara-Pratihāra Empire. He states that the volume of circulating coins was comparable to that of the Kushan period or of the Delhi sultanate. The silver content of these coins, however, decreased over time,²¹ whereas coins from Gujarat maintained a stable silver level which was higher than that of the first Pratihāra coins. This progressive debasement was not the sign of an economic decline, but rather of increasing monetization – linked to trade and to the needs of the army, which had to be paid and equipped; it was also indicative of the increasing difficulty of acquiring silver, as this metal had become more costly (Deyell 1999: 5,239). Through Gujarat, horses were imported and sent to the Gangetic Empire.²² Mas’ūdī writes that the Gurjara king “nourishes an implacable hatred against the Muslims” (see above), but conversely, Ibn Rusteh speaks of “the good relations” of the Gurjara with the Muslims. About the Gurjara king, the *Account of China and India* says: “No prince of India has such a beautiful cavalry; he owns a great number of camels and horses.” The power of religious institutions and the growing influence of the guilds in post-Gupta India may have restricted the economic and political resources of the rulers at times, but not as dramatically as the proponents of an “Indian feudal age” (Sharma 1958; Kosambi 1956) would have us believe.²³ In fact, the

²⁰ See below on guilds. *A Comment on Pāṇini’s Grammar (Kāshikā)* written at this time mentions associations of merchants including men of different castes, called *pūga*. An inscription at Peoha (Haryana) dating to King Bhoja’s time (Gurjara-Pratihāra) mentions horse traders, some of them Brahmins (who braved the ban on animal trade attached to their caste). The grants described by the inscriptions of this period were awarded by rulers, rich landowners, or merchants willing to enhance their status (Chakravarti, 2001a: 98). Various scholars have suggested that the period 500–1000 also saw the crystallization of the *jāti* caste system, which represents the emergence of new solidarities within a context of political fragmentation (Adshead 2004: 122).

²¹ Various coins known as *drammas* were issued during the Gurjara-Pratihāra era (*vigrahapāla drama*, *ādivarāha drama*, and later *vināyaka-pāla drama*). A Chauhan ruler of the early eighth century issued the prototype for the *vigrahapāla drama*, influenced by Sassanid or Indo-Sassanid coins via the Hun coinage of northern and western India of the sixth century (Deyell 2001: 401ff.). Gujarat issued another type of “Indo-Sassanid” currency. The Sind region had both copper coins and silver coins, with the silver imported. The decreasing silver content of the Gurjara-Pratihāra coins reveals insufficient imports of this precious metal, and a deliberate choice to debase coins issued by state rulers. As stated above, the entire Asian area showed signs of silver hunger during the tenth century. In addition, the Ganges valley was only weakly connected to international trade at this time (Deyell 2001).

²² Until the sixth century, horses were imported from Central Asia. When the Huns disrupted the networks, imports by sea developed from Persia and Arabia.

²³ For D. D. Kosambi (2001: 247), the post-Gupta period was marked by an administrative decentralization which gave increasing power to “feudal barons” *sāmānta* and triggered an evolution from “communal property to feudal property.” The concept of Indian feudalism has now been largely abandoned.



Figure 3.1 Gold Stater, Kidarite coin, 360–380, king standing, seated goddess. © Bos Reis www.anythinganywhere.com. This type of coin would remain the model for Hepthalite coins (fifth–sixth century), and later for the coins of the Kashmiri kings until the twelfth century.



Figure 3.2 Coin of the Gurjara-Pratihāra king Mihira Bhoja I (c. 836–885). It shows Vishnu with a boar's head.



Figure 3.3 Coin from Gujarat (c. tenth century), 17 mm, 3.98 g. On the left, stylized bust; on the right, stylized fire altar (showing the influence of Sassanid coins) © T. K. Mallon-McCorgray

most powerful dynasties and kings issued “the maximum number of grants and the most lavish grants” (Singh 2008: 573). Beyond the core of each empire, directly administered by the king, a circle of tributary princes (*sāmanta*) paid tributes, participated in royal assemblies, and received official assignments.

The empire was in decline at the beginning of the tenth century, and disintegrated soon thereafter, replaced by smaller kingdoms ruled by the Chandelā of Khajuraho and Kalanjara, the Chāhamāna of Shākhambārī (Rajasthan), the Paramāra of Dhara (Malwa), and the Kalachuri of Tripuri (Uttar Pradesh). A small Gurjara-Pratihāra kingdom remained, centered on Kanauj. Yet trade did continue among regions. An inscription from the Shikar region dated to 973 describes a Chāhamāna (Chauhan) ruler from Rajasthan:

Discussions on the nature of Indian states have been obscured by the application of African or European models to Indian realities, which varied according to places and periods. It is obvious that the diversity of the Indian states should prevent us from applying a single model to all the developments we observe.

... who worshipped Sri Harsha [Siva Mahadeva] with strings of pearls without end; with wanton steeds, and gorgeous garments and weapons; with camphor, with cakes mixed with the fruit of the Areca; with the best sandalwood of Malabar; with immense quantities of gold; with conspicuous gifts composed of the birds of every country and species, of herds of elephants with their mates. (Harsha inscription, verse 24)²⁴

Divided, and partly subjugated by the Gurjara-Pratihāra, Gujarat was not a major political power. The Maitraka dynasty established in 475 from their capital Vallabhi (Saurashtra) remained in power until around 767. It was later supplanted by the Saindhava (eighth–tenth century) in western Saurashtra; the Saindhava may have been vassals of the Gurjara-Pratihāra. Northern Gujarat was controlled by the Chapa of Vardhamana from the mid-eighth century onward. They were superseded in 942 by the Chālukya (Solanki dynasty), who established their capital at Anahilavāda.

Coins from Gujarat reveal the importance of this region in trade networks. Their silver content was higher than that of the Gurjara-Pratihāra coins, and it remained stable (Deyell 1999: 33). Unlike the coins of the Gurjara-Pratihāra Empire, the coins of Gujarat were used as a medium for transregional exchanges and were even imitated (Subrahmanyam 1994a: 14); Arab and Persian chroniclers also mention that foreign coins entered Gujarat.²⁵ Ibn Khurdādhbeh (1865: 289) describes the use of dirhams called Tatherid (*tātariya*) (probably from the Greek *stater*). Mas'ūdī (below) mentions Tatherid coins in the Rāshtrakūta kingdom, and Ibn Hawqal uses the same name for coins from Gandhara and Panjab: *tātariya* appears to refer to all coins influenced by ancient Indo-Sassanid or Indo-Scythian models. Moreover, red polished ware from Gujarat and Maharashtra is present at many Iranian coastal sites (Chakravarti 2001b: 260). Due to harsh climatic conditions during the ninth and tenth centuries, Gujarat and Rajasthan developed irrigation by means of the “Persian wheel” (*araghatta*), which was a *saqiya* using animal power to raise water from open wells (the buckets here were fixed onto a wheel-driven chain). The Chālukya of Anahilavāda (942–1244) would later set up a “Ministry of Irrigation.”

The Rāshtrakūta from the Deccan Region, “Friends of the Muslims”

South of the Gurjara-Pratihāra, the Chālukya from Bādāmi dominated in the Deccan region, with their strength peaking under the reigns of the kings Pulakeshin II (610–642) – who successfully withstood an attack by Harsha in 620 – Vikramaditya I (655–680), and Vikramaditya II (733–746). The wars waged against the Pallava, however, were more often marked by defeat (in 642, 670, and 674) than by victory (in 630).²⁶ Contacts were established with the Persian Gulf and even as far as the eastern Indian Ocean. According to the Arab historian Tabarī, Pulakeshin II sent an embassy to King

²⁴ *Journal of the Asiatic Society of Bengal*, 4 (43), 1835: 367–385. See also Chattopadhyaya 2001: 299.

²⁵ According to the *Account of China and India*, trade, in the states of “King Gudjra,” was conducted with silver powder: here the text is probably referring to Saurashtra, controlled by the Gurjara-Pratihāra Empire (Deyell 1999: 37).

²⁶ Pulakeshin II seized territories from Kalinga and appointed his brother as viceroy. This brother founded the dynasty of the eastern Chālukya, who reigned over the kingdom of Vengi. The Chinese pilgrim Xuanzang visited the Chālukya Empire around 641.

Khosrau II in Persia, in 625/626. A fresco in Cave no. 1 at Ajanta may feature an embassy from this Persian king to Pulakeshin II. The Chālukya also sent ships to Sri Lanka and Southeast Asia.

The Rāshtrakūta, previously vassals of the Chālukya, overthrew their former masters in 753; their first capital was at Achalapura (Ellichpur) in Berar (Hyderabad region). Karnataka, Maharashtra, and part of Andhra Pradesh formed the core of the empire, which was probably the most powerful one in India until the second half of the tenth century. During that time, the Rāshtrakūta were supplanted by other Chālukya, who chose Kalyāna as their capital. The strength of these Chālukya appears to have been more limited, a situation which worked in favor of a Chola revival. In Kerala, a Chera kingdom developed during the ninth century. The *Account of China and India* mentions the Rāshtrakūta king, along with the caliph, the emperor of China, and the emperor of “Rum” (the Byzantine emperor), as one of the most powerful rulers in the world.²⁷ The Rāshtrakūta were preeminent under King Govinda III (793–814), who conquered Kanauj, took control of Gujarat and received tributes from the southern kingdoms (Chola, Pāndya, Chera) (even the king of Sri Lanka submitted to him). The reign of Govinda’s successor, King Amoghavarsha I, a learned Jain, was more peaceful. Malkhed (Mānyakheta) became the capital of the empire, and retained this position until the fall of the dynasty. While the Rāshtrakūta Empire was still dominant under the kings Indra III (914–929) and Krishna III (939–967), it disintegrated rapidly afterward. The empire’s resources came from tributes from the vassalized kingdoms, and from taxes levied on land, salt, ore, and products imported into the central region, which was divided into provinces called *rashtra*. Officials were “paid” in land grants. The emergence of hereditary positions seems to have been a distinctive feature of the empire; it weakened the village councils (Reddy 2006: 83). Inscriptions mention the existence of artisan guilds. While Krishna I was a Shaivite devotee, the emperors usually favored Jainism and tolerated all religious currents. Many edifices were built, notably the rock-cut temples at Ellora (such as the Kailasanatha temple) and Elephanta, or the Jain temple of Narayana at Pattadakal. The kingdom exported perfumes, wood, and cotton fabrics, and imported horses, whose trade was largely in the hands of Muslim merchants.

The entire western coast of India was marked by its encounter with Islam, which “opened up new connections with western Asia, just as Buddhism had linked India with East Asia” (Kulke and Rothermund 1998: 162). Islam entered India and progressed in two different ways: following military conquests and along the trade networks. This progress of Islam through trade occurred over the long term, and was virtually unrelated to conquests.²⁸ Islam, as previously noted, had been established in Sind since the start of the eighth century. During the ninth century, the region was practically autonomous, under the Arab dynasty of the Habbarids. Moreover, Ismailis took the upper hand in several towns during the tenth century, in particular in the two capitals of Sind: Mansūra

²⁷ See also the quotation by Mas‘ūdī above. Ibn Khurdādhbeh had already expressed the same appreciation: “The most powerful Indian ruler is the Balhara” (1865: 289). The term may have been taken from the Sanskrit Vallabharaja.

²⁸ M. Gaborieau (1995a: 431) aptly describes the progress of Islam along the coasts of southern Asia as a “merchant envelopment.”

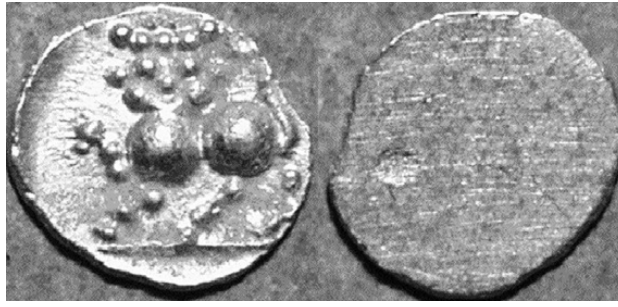


Figure 3.4 Rāshtrakūta coin? Lion standing left with head turned to face. Diam. 7 mm, 0.19 g. © VCoins.com

and Multān,²⁹ whence they would be evicted in 1010 and again in 1025 by the Turk Maḥmūd of Ghazni. Close relationships were set up between Sind and Egypt at this time; the *khotba* was read in the name of the Egyptian Fatimid ruler, and Sind issued dirhams, “that began to be modelled upon Fatimid-Egyptian coinage – at least [this was true of the dirhams] at Multān” (Wink 1990: 175, 216). Ismaili activity also developed along India’s western coast, especially in Gujarat, where castes of merchants converted to Islam.³⁰

Since the dawn of Islam, Muslims had participated actively in Indian trade, whether they were Indians, Persians, or Arabs. The importance of international trade in the city of Daybul (Banbhore), at the mouth of the Indus River, following its conquest by Muslims at the beginning of the eighth century has been noted above. Daybul remained a major entrepôt until the twelfth century. After changes occurred in the course of the Indus River’s branches, Daybul was supplanted by a new port further east, called Lahori Bandar. Lahori Bandar would later become a major center for exportation, between the fourteenth and eighteenth centuries. During the ninth and tenth centuries, both western India and Gujarat used gold dinars and silver dirhams and were integrated *de facto* into the monetary system of the Islamic world. Sassano-Islamic ceramics have been unearthed at Daybul (in levels dated later than 740 CE), as well as at Dwarka (Gujarat) (Glover 2002: 168–169).

On the Konkan coast, the highly favorable reception given to the Muslims by the Rāshtrakūta power helped spread Islam and merchant networks. Mas‘ūdī writes:

Among the kings of Sindh and India, none treats the Muslims who live in their country with more respect than the Ballahār. In his kingdom, Islam is honored and protected.³¹

Various authors note an Arab presence in the Konkan region; these Arabs would later be called Nāvayāt (“newcomers”). According to Wink (2004: 201), however, the Nāvayāt arrived from the Persian Gulf later, during the thirteenth century. Mas‘ūdī emphasizes that as early as the ninth century, “ten thousand Muslims . . . from Sīrāf, ‘Oman, Baṣra, Baghdad and other cities [settled on the west coast of India], and married women there.”³²

²⁹ A Fatimid military expedition was launched in 983 to capture the city of Multān.

³⁰ Gaborieau 1995a: 434. The Ismaili communities of the Bohrā and Khoja have remained active up to our own time.

³¹ Mas‘ūdī, para. 425, 1962: 154. Ballahār refers to the title of the Rāshtrakūta kings. The same remarks are already present in the *Account of China and India*.

³² Arab sources praised the rulers of India and of Sri Lanka, and also of Indonesia and China, for the significant rights granted to the Muslims and to their outposts. In the southern Islamic ports, “foreign businessmen could not attain the same privileges and status as Muslim merchants and shipowners enjoyed

He calls these Muslims *bayāsira* (the relations between Arabia and the Malabar coast, however, date from a pre-Islamic period; see above). On intermarriages mentioned by Mas'ūdī, it is interesting to note that the name Māppiḷa given to the Muslim community in South India etymologically means “grandchild,” but the term has taken on the meaning of “bridegroom, son-in-law.”³³ At Sanjan (Samyana, on the Konkan coast), the center of an administrative unit (*mandala*), the governorate was entrusted to a Muslim, Sugatipa Madhumati (Muhammad).³⁴ An inscription dated to 875 also reveals that Arabs resided at Madurai, in the Pāndya country, and Muslims probably visited the Coromandel coast. Sharma and other authors toyed with the idea of a decline in trade under the Rāshtrakūta kings, but available data reveal its vitality, as seen in the Muslim presence and in the use of currencies.³⁵

Jewish merchants also formed a sizeable community. Epigraphy proves their presence from the ninth century onward, but Jews had already arrived during Roman times.³⁶ Moreover, as mentioned above, Zoroastrian Parsis took refuge in India – where they had already established a presence in earlier times – when the Muslim armies conquered Iran (636–651), and during the ensuing centuries. Most of these Zoroastrian Parsis settled in Gujarat.

Fleets from Gujarat and Konkan – carrying Hindu, Buddhist, and Muslim merchants – sailed as far as China, via Malaysia and Sumatra. Indians from the Malabar and the Coromandel coasts were also active in the Indian Ocean trade.³⁷ On the Malabar coast, Quilon (Kollam, Kulam) was centrally placed on the trade networks, as various texts noted from the ninth century onward: the *Account of China and India* mentions Kūlam Malay (called Malay by Ibn Khurdādhbeh)³⁸ as a port where ships from Sīrāf and Muscat sheltered, waiting for favorable winds, on their way to China (see above). Merchandise from the Orient was offloaded not only in Quilon, but also in Mantai and Galle in Sri Lanka.³⁹ between the eighth and tenth centuries, “Chinese artifacts [at Mantai] include white pottery, Changsha wares, Yue ware celadon, Sancai [‘three-color’] pottery, and ‘Dusun’ jars” (Carswell 1998: 672). Sassano-Islamic pottery

in India, China and the southern areas” (Labib 1974: 240). Wink (1990: 72, 101) claims that the immigration of Brahmins and the advance of the caste system in Malabar went along with a strengthening of the ban on maritime journeys for the Brahmins, which in turn encouraged Muslim implantation, but this remains speculative.

³³ Intermarriages were a means of “indianization” for Islam, as were conversions of merchants and of people who were in contact with the sea (fishermen, sailors).

³⁴ Chakravarti 2001b: 265. This Muslim governor granted lands to a Brahmanic complex, as well as rights on revenues from a village. After the demise of the Rāshtrakūta power, the governor was no longer a Muslim, but three Arab merchants are listed among the most influential men of the city (Chakravarti 2001b: 275).

³⁵ Kamath 2001 versus Chakravarti 2001b: 276. Mas'ūdī (1841: 389) notes: “In the empire [of the Ballahra] *tatarian* dirhams are in circulation, one of which weighs a drachm and a half”; this currency has also been mentioned in Gujarat (see above). Gold and silver were also in use, in the form of lumps or powder.

³⁶ They were present among the Anjuvannam guild as early as the ninth century (Bouchon 1975: 10). Note the division between “black Jews,” who had been settled in the country for a long time, and “white Jews,” who arrived in the wake of the Arab merchants.

³⁷ Hindu ships continued to sail to the Red Sea. Tabarī and later Mas'ūdī have signaled violent actions of Indian ships on Dahlak and on Socotra, but the precise origin of these ships is unknown (see above).

³⁸ This name may be linked to the name of the language spoken in the Kerala region and in the Laccadives Islands – Malayālam (from *mala*, “mountain”). Cf. also Skt. *malai*, “garland.”

³⁹ Mantai was inhabited from the middle of the first millennium BCE to the tenth century CE.

is also present, at Tissamaharama (Schenk 2007: 58). Kulam was captured by a Chola ruler at the end of the tenth century, an event reflecting the significance of this city. Nestorian Christians played an important role in the city, along with other communities. A Syriac document written in the eighteenth century mentions the donation of a piece of land to “the Syrian Father” Mar Sapor in 823. This Christian notable was able to build a church, and received various economic benefits from the local ruler. A man called Maruvān Sapīr Isō mentioned in ninth-century Quilon copper plates may in fact be Mar Sapor. The copper plates list witnesses to a grant bearing Zoroastrian, Jewish, and Muslim names.⁴⁰ The Christians obtained the privilege of weighing goods and the right to levy taxes. Guilds (notably the Indian Manigrāmam)⁴¹ were also involved in collecting and managing taxes. On the Malabar coast, Eli (=Madayi?) was another major trading center. The decline of the Rāshtrakūta at the end of the tenth century had internal causes, and paralleled that of trade with the Persian Gulf.

The Pāla of Bengal

To the east of the Gurjara-Pratihāra of northern India, the Pāla dynasty reigned over Bengal and large parts of Bihar. King Dharmapāla (c. 775-812) managed to control northern India, with the kingdoms of Kanauj, Gandhara, Malwa, and Berar becoming his vassals. His successor Devapāla (812-850) further extended the empire, toward the northwest (Kamboja), the south, the Deccan, along the eastern coast of India, and toward the northeast, in Assam. Later, the empire appears to have been in decline, exhausted by external conflicts. The power of the Pāla was not inferior to that of their neighbors. Mas’ūdī writes: “The Rahma has more men, elephants and horses than the Ballahara, the prince of the Gurjara and the prince of Thakka . . . This kingdom produces a stuff which is not to be found elsewhere; so fine and delicate is this material that a dress made of it may be passed through a signet-ring. It is made of cotton, and we have seen a piece of it . . . Cowries are used for [monetary] transactions.”⁴² The core of the empire was divided into provinces *bhukti*, where taxes were levied, whereas vassal kings *mahāsāmanta* paid tributes. Continuing the tradition of royal patronage of Buddhist institutions⁴³ and controlling the main sacred Buddhist sites (Buddhism was in decline nearly everywhere else in India) from their city of Tāmralipti, the Pāla played a predominant role in trade and religious relations with Buddhist countries abroad. While this port declined after the eighth century, partly for hydrographic reasons, one notes the rise of another port, called Samandar by Arab chroniclers. It was located near Chittagong (Chakravarti 2001a: 90).⁴⁴ “A verse from the *Ramacarita*

⁴⁰ Abraham 1988: 20-22, 27-28. Maruvān Sapīr Isō: from *mar*, a Syriac title referring to a bishop, and Sabr Isho, which means “Jesus is my hope” in Syriac. Traditions hold that Syrian Christians led by Kani Thomman (Thomas of Cana) arrived c. 800.

⁴¹ A name that Chakravarti (2002b: 27) connects with the term *vaniggrāma* found in northern India from the second century BCE onward.

⁴² Mas’ūdī, para. 428, 1962: 154-155. See also Ferrand 1913: 43.

⁴³ The Pāla also patronized Vishnuism and Shaivism (Wink 1990: 269).

⁴⁴ According to R. Mukherjee (2011: 37), prior to the Arabs, Turushka were mentioned in the region of Chittagong, who may have been pre-Muslim Persians or Central Asians (Turushka literally means “Turk”).

describes King Dharmapāla as ‘the light of the race of [Samudra, the ocean], whose fleet was majestic, when it crossed the sea, . . . and whose fame was also becoming resplendent after having crossed the sea” (Jacq-Hergoualc’h *et al.* 1998: 277).⁴⁵ The maritime orientation of the Pāla did not imply state control over trade: trade was in the hands of private merchants. Nālandā, which enjoyed the income from 100 or 200 villages, remained a place of great renown for Buddhist teachings; it was visited by scholars from Southeast Asia and China (Xuanzang sojourned there for fifteen months). Bālaputra, the king of Srīwijaya, built a monastery there in 860, and this monastery received donations (lands) from King Devapāla. Mahāyāna Buddhism took its specific Tantric form in Bengal; this form spread to Tibet and Southeast Asia.

While cowries were the main form of currency, “terms referring to coins, such as *purāna* and *dramma*, do figure in the copper plates of the Pāla and the Sena” (Chakravarti 2002b: 177). Indeed, gold coins are known, issued by the kings Dharmapāla and Devapāla. To the east, the kingdom of Samatata (eastern Bengal) issued gold and silver coins, which have been recovered primarily at Mainamati, under the Khadga dynasty (seventh–eighth century) and the Deva dynasty (eighth–ninth century). These metals came from Yunnan and Burma. Mainamati has also yielded coins of the bull/*trishūla* (trident) type, originating in the neighboring kingdom of Harikela, which bordered Arakan (Chittagong region). Muslim merchants appear to have been present in this kingdom of Harikela.

The Pallava (Tamil Nadu and Andhra Pradesh)

On the eastern coast of India, the Pallava from Kāñchīpuram, who reigned in Tamil Nadu and Andhra Pradesh, were a major economic power in the subcontinent from the late sixth century onward. They remained preeminent until the ninth century, controlling the coast between the mouth of the Krishna River and the Kāverī River. The Pallava, however, were confronted with several Pāndya expeditions during the eighth and the ninth centuries; a Rāshtrakūta king invaded Kāñchīpuram at the beginning of the ninth century, and in 893 the Chola king Aditya I seized the entire core of the Pallava country, Tondaimandalam. Production grew in eastern and southern India, in the absence of real technological advances, except for the introduction of a sluice and piston mechanism within the reservoirs to regulate the outflow of water (Palat 2015: 45). This innovation may reflect a borrowing from northern Sri Lanka (Palat 2015: 45). The Pallava, the Pāla, and the merchants who lived in their territories had the upper hand in the eastern Indian Ocean trade, directed toward Southeast Asia and China.

In the days of the Pallava, great guilds emerged as a political and economic power in South India. Operating in “many countries,” they financed “local development projects and the construction of temples, but also lent money to the kings” (Kulke and Rothermund 2010: 84). Constituting “a State within the State,” they raised troops, and enjoyed immunities. “The merchants had their own urban settlements, with

⁴⁵ The artistic and religious influence of the Pāla, as these authors point out, reflects their significance in trade.

autonomous institutions of local government. The great ports also had their guilds and autonomous institutions” (Kulke and Rothermund 2010: 84), but these guilds were under the control of royal officers. Among the most powerful guilds were the Ayyāvoḷe,⁴⁶ who dominated Deccan trade, and the Manigrāmam, settled in Tamil Nadu (they may have originated in the Chola country).⁴⁷ The Manigrāmam traded mainly with Southeast Asia, whereas the Ayyāvoḷe were involved in western networks; no real division of space existed between these guilds, however; the Ayyāvoḷe were present in Tamil Nadu during the ninth century.⁴⁸ Their expansion is noticeable during the tenth and eleventh centuries, at a time when the Chālukya and Chola were looking kindly upon progress in agriculture and trade.

Merchants from South India were active in Sri Lanka: an inscription emanating from a guild mentions associations of merchants who were “skilled travelers by sea, engaged in buying and selling and [owning] a large assortment of merchandise loaded aboard sea vessels of various kinds” (Jacq-Hergoualc’h *et al.* 1998: 282).⁴⁹

South India enjoyed internal growth, thanks to the temples and the Brahmanic institutions called *brahmadēya*, which cultivated new lands⁵⁰ and played an integrative role within kingdoms. Social diversification paralleled the development of the caste system (Champakalakshmi 1996: 43). Temples – especially royal temples – formed the nuclei of urban centers with low-density populations (Heitzman 1997: 113).⁵¹ Great temples were built, particularly at Kāñchīpuram and Māmallapuram (Mahābalipuram), under the reigns of the kings Mahendravarman (600–625), Narasimhavarman I (625–670), and Narasimhavarman II (700–728). Kāñchīpuram housed centers for Hindu education (*ghatika*), which would later be found in Karnataka. Advances in rice cultivation and the development of towns that were centered on temples and linked to long-

⁴⁶ Also called Aiññurruvar, “the Five Hundred,” although Karashima and Subbarayalu (2002: 75) have cast doubt on this identification. While the Aiññurruvar refer to Aihole as their origin (Karnataka) during the seventh century, their activities are primarily documented in Tamil Nadu (Karashima and Subbarayalu 2002: 72ff.). R. Champakalakshmi does not exclude an earlier influence from the Ganges valley (1996: 50). Inscriptions record as many as 46 groups associated with the Five Hundred, including armed mercenaries (Champakalakshmi 2001: 327). The term “Añjuvannam” refers to an organization of foreign merchants; it was first present on the west coast during the eighth–ninth century; these merchants extended their activity onto other coasts of South India from the eleventh century onward. “Initially the term Añjuvannam seems to have referred to Jewish traders . . . Later, however, it also came to denote Arab Muslim traders” (Champakalakshmi 2001: 328).

⁴⁷ Abraham 1988: 29. Their presence at Kāverīpaṭṭinam seems to go back to ancient times. While Abraham’s research was based on 150 inscriptions, N. Karashima *et al.* (2002) have studied 314 inscriptions. The Manigrāmam had connections with agrarian communities involved in trade (Champakalakshmi 1996: 49).

⁴⁸ Abraham 1988: 45; Champakalakshmi 2001: 331, 332. Kulke and Rothermund give the example of merchants from the Malabar coast who established a temple devoted to Vishnu at Pagan in Burma during the thirteenth century.

⁴⁹ The mention of a sanctuary devoted to Avalokiteshvara, belonging to the school of Mahāyāna Buddhism, indicates the likely presence of merchants from southeastern India (Jacq-Hergoualc’h *et al.* 1998).

⁵⁰ An “alliance” was formed between the Brahmins and the *velāla* landowners; local elites, Brahmins, and temples were the chief beneficiaries of the taxes levied (Champakalakshmi 1996: 40).

⁵¹ This low demographic density of the Indian cities should not lead us to consider, as Wink does, that “they are not the privileged locus of sustained and cumulative social change” (2004: 76). Wink has placed too much emphasis on the instability of the Indian cities and their “volatile” demography (2004: 73).

distance trade, both worked in favor of the statebuilding process (this would more clearly be the case once again during the later Chola period) (Champakalakshmi 1996: 40–42). The Pallava set up an administration and organized tax collection. Starting in the eighth century, market centers known as *nagaram* emerged; they would take on new significance during the tenth century, and even more so during the eleventh century (Champakalakshmi 1996: 40–42). The *nagaram* appear to have been connected at the same time to the rural sector, to royal centers, and to ports.⁵² Although the Pallava kings were Hindus, they also extended their patronage to Buddhists. Xuanzang records that the kingdom had a hundred monasteries with 10,000 monks studying Mahāyāna Buddhism.⁵³ Nāgapattinam, in particular, was a significant Buddhist center during the eighth and ninth centuries. Chinese ceramics have been recovered at this port, as well as at other coastal sites in Tamil Nadu, revealing contacts with China, probably through Chinese pilgrims as well as Indian merchants traveling to Canton and other ports (Schottenhammer 1999: 284). The Chinese chronicles record embassies from “southern India” (Nan Tianzhu) in 692, 710, and 720 (Wang Gungwu 1998: 122–123). In return, China sent an embassy in 720. Further north, Sassano-Islamic pottery has been excavated at Manikpatna, Pallur (Chilka Lake, Orissa), and Mahastangarh (Bangladesh); these discoveries shed light on the connections between western and eastern networks (Glover 2002: 169).

From the large ports of Māmallapuram and Mylapore, the Pallava maintained an active trading policy toward Sri Lanka and Southeast Asia, as seen in their artistic influences. While relations appear to have been cordial with Srīwijaya, an Indian military intervention did occur on the Thai–Malay peninsula: under the Pallava king Nandivarman III (844–866), a Pallava officer left an inscription at Takuapa (Takola), referring to the construction of a water tank which he entrusted to the Manigrāmam guild of Indian merchants, who had set up a military camp there (this site has also yielded statues in the Pallava style). Here what we may be seeing is an Indian attempt at diverting trade via the isthmus of Kra, at the expense of Palembang and the Straits of Malacca (Kulke and Rothermund 1998: 122). King Nandivarman III is described in the *Nandikkalambakam* as “Avani-nāranan [Vishnu on Earth]” “unparalleled ruler of the four oceans, with immeasurable naval power” (Jacq-Hergoualc’h *et al.* 1998: 279).

The Prosperity of Sri Lanka

The *Account of China and India* also reveals the significance of Sri Lanka, where people of diverse faiths, such as Jews and Manicheans, had settled. On this island, the merchants acquired pearls, rubies, topaz, gold, aloeswood, and conches. Sri Lanka

⁵² *Nagaram* also refers to an assembly or organization of merchants living in the same town (see Karashima and Subbarayalu 2002). Northern India saw the development of *mandapikā* market centers, functioning as intermediaries between villages and towns (Chakravarti 2002b: ch. 8). Officials or merchants collected taxes in these market centers. In the Deccan, as well, supralocal trade centers, called *peth*, *petha*, or *pentha*, were present (Chakravarti 2002b: ch. 9). The expansion of all these centers obviously reflects agricultural growth.

⁵³ To the south of Kāñchīpuram, “there was a large monastery which was visited by many foreign scholars” (Kulke and Rothermund 1998: 121).

produced crucible steel, and probably exported it.⁵⁴ Excavations at Mantai have shown Sri Lanka's integration into East Asian, western Asian, South Arabian, Egyptian, and East African networks (Carswell 1996).⁵⁵ Mantai's significance lay in its location and in its "symbiotic relationship to the capital city of Anurādhapura" (Carswell 2013: 12). Mantai was a major site for the production of "Indo-Pacific" beads (Dussubieux 2010; Wood 2015). Ceramics from the Persian Gulf have been recovered at Mantai, as well as at Anurādhapura and Polonnaruwa (Glover 2002: 169). According to Ibn Khurdābeh, "the king of Serendib imports wine from Iraq." He also imported elephants: "All the kings [of India] attach much importance to elephants and they compete to acquire them at high cost" (1865: 289). Sinhalese ships probably sailed to China. A Chinese text dated to the ninth century, describing the vessels arriving each year in An-nan (northern Vietnam) and Huangzhou, reads: "Among these, the ships from the Lion Kingdom are the largest, with stairways for loading and unloading which are several tens of feet in height."⁵⁶ Sri Lanka reexported Chinese ceramics, which did not appear in Kerala and Tamil Nadu until the eleventh century. Mantai fell into decline following the Chola invasion and the looting of Anurādhapura at the start of this century.⁵⁷ While the networks between China and South Asia had previously passed first through Sri Lanka, from the tenth century onward, connections developed directly with the Chola.

The Emergence of the Chola by the Late Tenth Century

Between the late tenth and the thirteenth centuries, the main political and commercial power was located in southeastern India. Taking advantage of the decline of the Pallava, who were weakened by their wars against the Rāshtrakūta, the Chola claimed their independence under King Aditya I (871-907). After suffering a defeat against the Rāshtrakūta in 949, the Chola asserted their preeminence under King Rājaraṇa I's reign (985-1014). This king defeated the Pāndya and the Chera, conquered Sri Lanka and took possession of the Maldives.

The picture we see of India during this period between the eighth and tenth centuries thus refutes statements often made of an economic and cultural decline. Links with eastern Asia were strengthened by the rise of China under the Tang dynasty and the development of insular Southeast Asia as a semi-periphery of the world-system. Indeed, the ancient trade routes between the China Sea and the Indian Ocean shifted southward; they circumvented the Thai-Malay peninsula, no longer crossing it. This change reflects the increasing significance of Sumatra and its aromatics.

⁵⁴ A metallurgic site dated to the late first millennium and using a technique of iron carburization has recently been discovered (Craddock 2003: 245).

⁵⁵ Besides Chinese ceramics (see above), these excavations have revealed Persian and more importantly Egyptian glass vessels (ninth-tenth century), kohl sticks, and glazed ceramics from Iraq or Iran (Coningham 2002: 99).

⁵⁶ Devendra 2002: 149, quoting Gunawardana and Sakurai 1981. The Chinese texts mention that the Sinhalese ships could carry 600 or 700 men.

⁵⁷ Jacq-Hergoualc'h *et al.* 1998: 283. The silting of the harbor may also have played a role in its decline (Wink 2004: 35). The Sinhalese capital shifted to Polonnaruwa, whose main port was at Gokanna.

Southeast Asia: The Rise of the Sṛīwijayan Thalassocracy and the Javanese Kingdoms

In this sea are the dominions of the Maharaj, the king of the islands. The population and number of the troops of his kingdom cannot be counted. And the islands under his sceptre are so numerous, that the most fast sailing vessel is not able to go round them in two years . . . Among [his resources] are camphor, aloes, gillyflowers, sandalwood, betelnuts, mace, cardamoms, cubebs, and the like. (Mas'ūdī, para. 376, 1962: 139)

From [Sumatra and Java], one reaches the Spice Islands after fifteen days' sailing. (Ibn Khurdābeh, in Ferrand 1913: 28)

The Thalassocracy of Sṛīwijaya

The break-up of Funan during the seventh century and the turmoil affecting China during the eighth century left the field clear for political entities located in southeastern Sumatra, where Sṛīwijaya took the upper hand over Melayu (Jambi) between 671 and 685. As late as 644–645, Melayu dispatched an embassy to China. During his second visit to the east coast of Sumatra, the Chinese pilgrim Yijing noted that “Moluoyou is now Shilifoshi [Sṛīwijaya].”¹ The 683 inscription of Kedukan Bukit (Palembang, capital of the state)² mentions the departure of the army of Sṛīwijaya, probably toward Melayu (Mahdi 2008: 118).³ In addition, the king of Sṛīwijaya may have launched a naval expedition toward Java (Kulke 2001: 302), a testimony to politico-economic and perhaps religious rivalry (western Java being Vishnuite and Sṛīwijaya Buddhist). As mentioned above, the

¹ Yijing mentions more than ten “states” (*kuo*) in the “southern seas,” including Shilifoshi (Sṛīwijaya), Polushi (Barus), Heling (Walaing), Jiecha (Kedah), Dandan, Panpan (Thai–Malay peninsula), Foshibulo (Vijayapura, possibly in southwestern Kalimantan), Poli (perhaps Bali), and Chüelun (perhaps in eastern Indonesia).

² The inscription from Kedukan Bukit (Palembang) is dated to 683; this date may correspond to the founding of Sṛīwijaya. The inscriptions are in the Pallava script of South India. Palembang has left few archaeological remains; this is due to the nature of the Sṛīwijayan political setup, to the fact that the modern town partly covers the ancient capital, and also to the very structure of the ancient city (see Zhao Rugua, in Hirth and Rockhill 1911: 60). An “island” surrounded by a ditch has been excavated, containing the remnants of a brick building. Yijing mentions walls around the city; they may have been made of bamboo, which leaves no trace in the archaeological levels. New excavations have recently been undertaken.

³ According to K. R. Hall (1992: 199), the fertility of the Musi River valley contributed to Palembang’s predominance over rival fluvial systems. In addition, the hinterland (Pasemah country), in the Highlands, may have provided rice. A drum of the Dong Son type, bronze bowls, and bells have been discovered in this region, revealing ancient trade routes.

rise of Srīwijaya, marked by the erection of the stelae of Palembang, Kota Kapur (Bangka), Karang Brahi, and Palas Pasemah (Lampung), signaled the political and magical control of an area centered on the capital and the figure of the king.⁴ The strategic position of Srīwijaya compensated for its distance from exported raw materials (sandalwood from Timor, spices from the Moluccas, camphor from northern and western Sumatra). Mas'ūdī mentions “the king of the islands, from which drugs and spices are exported,” in connection with “the princes of India and several of the kings of the mountains of China which are opposite the islands of the Javaga” (Mas'ūdī 1962: 158). In addition, the preeminence of Srīwijaya was based on a system of alliances, in particular with the “Sea Peoples” (Orang Laut and Sama), for control over the trade routes and the major nodes structuring the networks, where the “center” redistributed goods in the course of patron–client relationships. The Sea Peoples provided crews for the ships and received part of the trade revenues. Srīwijaya cannot be considered as a centralized, structured state with a significant administration and a powerful army allowing it to impose its rule, but as a city-state culture in which Palembang was prominent. Relations were maintained with China, where the first Srīwijayan embassy arrived in 716. Others would follow in 724 and 728. The ships of Srīwijaya may have enjoyed preferential merchant status in China. Many remains of Chinese jars with an olive glaze, wares termed “Dusun,” after the name of groups in Kalimantan, have been excavated in the region of Palembang (Manguin [2004b] writes of the “massive appearance of Chinese ceramic ware”).⁵ Only a few western Asian shards were present (Glover 2002: 171). Srīwijaya attracted Chinese and Indian monks and pilgrims. Yijing, who sojourned four years in Palembang between 685 and 689, mentions the presence of 1,000 Buddhist priests, and he recommended that the Chinese going to India should stop at Palembang in order to study Buddhism there.⁶ Indian scholars also stopped at Srīwijaya: Dharmapāla (late eighth century), for example, who came from Nālandā, and Vajrabodhi, on his way to China.⁷ Buddhism, at this time, spread from the king and the elites to the other sectors of the population.

⁴ Various authors have emphasized the ritual and symbolic authority of the “center” rather than its administrative power: see Wolters 1999 and Manguin 2000c, who writes of an empire of city-states. See also Wisseman Christie 1995: 239–240. The local elites of the peripheries (upstream) probably participated in religious ceremonies held in the center (Palembang). The inscriptions of Srīwijaya include stones erected during ceremonies intended to ensure success in a venture, commemorative stones mentioning royal grants or victories, and stones expressing oaths (Wisseman Christie 1995: 265ff.). Wisseman Christie notes that the location of the inscriptions dated to the seventh century sheds light on the political organization of Srīwijaya. Seven inscriptions are dated between 682 and 686; three were located at Palembang and four toward the outside of the “kingdom.” On the nature of the Srīwijayan state, see Manguin 2000c and d.

⁵ Moreover, Chinese people as well as merchants returning from China stopped on the western coast of Kalimantan: a bead with high lead content, probably of Chinese origin, has been excavated at Hitam Cave, along with Indian beads (ninth century, Sarawak) (Dussubieux 2001: 202–203, and p.c.).

⁶ The remains of a stupa and of a Buddha made of granite have been discovered at Bukit Seguntang (Palembang); they are dated to the seventh–eighth century. Bronze Buddhas have been found in the Musi River. Moreover, a statue featuring Ganesa unearthed at Palembang may date back to the eighth century and not to the twelfth century as previously suggested (Brown 1987). The king was a bodhisattva figure: both intercessor and divinity.

⁷ “Vajrabodhi and his disciple Amoghvajra, whom he met in Java, are credited with introducing Tantric Buddhism to China” (Kulke and Rothermund 1998: 157). Srīwijaya remained a center of Buddhist

Arabs and Persians visited the ports of Srīwijaya (the Zabag of the Arab geographers),⁸ and the dinar of the caliphate became the most coveted currency.⁹ Al-Sirāfi recounts the memories of a merchant from Sirāf, Yunus ibn Mihrān, who traveled to the city where the Mahārāja (the king of Srīwijaya) resided; he saw there “more markets than could be counted; in [one of these markets], [there were] 800 money changers, without counting those in other markets.”¹⁰ “In all likelihood, visiting merchants were required to change their foreign monies into local currency, a practice that would be followed by a number of Southeast Asian kingdoms in later centuries” (Wicks 1992: 231). The rulers of Srīwijaya also practiced piracy, as evidenced by the story of the Jewish merchant Ishāq, already mentioned. According to a legend reported by the Persian and Arab geographers, the king’s revenues were melted into gold ingots, which were thrown into the water at the mouth of the Musi River.¹¹ When the king died, the gold was recovered and distributed to princes, officials, and the population, according to the rank of each person.

A major entrepôt of Southeast Asia, Srīwijaya was also a necessary “gateway” along the route to China, where it sent its ships. The partnership of Palembang with China partly accounts for its privileged position. Srīwijaya also benefited from its own exports of products. Wolters identified three key products in the trade between Srīwijaya and China: benzoin, camphor, and a resin called *ju* (used as incense and medicine, which may have been the resin of a pine tree, *Pinus merkusii* Jungh) found in northern Sumatra and other regions of insular Southeast Asia: this may explain the attempts by Srīwijaya to control collection centers (Wolters 1967: 105). In addition, Wang Gungwu mentions products from the western Indian Ocean arriving through Southeast Asia (“Po-sse [Persian] products”) – storax, myrobalan, malachite, textiles from Syria, glass,¹² aloes, ambergris, limonite, indigo, rose water, dragon’s blood, and more – as well as products from the “Southern Seas”: cloves, nutmeg, cardamom, various medicinal plants, wood (sandalwood, lakawood,¹³

literacy at least until the beginning of the eleventh century: Atisa, who under the name Dīpankara Srijnāna reformed Tibetan Buddhism, sojourned in Srīwijaya from 1011 to 1023 (Sastri 1949: 78; Nik Hassan Shuhaimi bin Nik Abdul Rahman 1990: 77–78).

⁸ Sauvaget (1948) has demonstrated that it should be read “Zabag” and not “Jawaga,” as Ferrand (1913–1914) has written, and “Srīwija(ya),” not “Sribuza.” According to Tibbetts (1979), Zabag first referred to Java instead of Sumatra, prior to 860.

⁹ For the period between the eighth and tenth centuries, “Islamic” glass has been recovered in and around Palembang, and also on the Thai–Malay peninsula (see below) (Dussubieux 2001: 179, 201). Palembang has also yielded ceramics from the Persian Gulf and from India. Among the glass analyzed by Dussubieux, beads from Gunung Wingo (seventh–eighth century) and a bead from Palembang are made of alumina glass and are therefore of Indian origin (Dussubieux 2001).

¹⁰ Al-Sirāfi, para. 87, Freeman–Grenville 1981: 80. Al-Sirāfi’s book also describes the town of Palembang, “the capital of Zabag,” with its houses “built like rafts on the water.”

¹¹ In Ibn Khurdābeh, c. 885, Abū Zayd, 916, and Mas‘ūdī, 943. See below.

¹² The Air Sugihan site, to the east of the Musi River, has yielded segmented gold-glass beads, known in the Mediterranean between 300 and 1000. Glass from South Asia or Sri Lanka (with mineral soda) has also been unearthed at Talang Kikim as well (Palembang). The Kambeng Unglen site (Palembang) (ninth–tenth century) contained glass using soda ash, from the Muslim world (Dussubieux 2010).

¹³ *Dalbergia parviflora* Roxb. The first mention occurs in a Chinese text from the fourth century. It indicates its provenance as southern China: this region must have imported it.

aloeswood,¹⁴ ebony), ivory, rhinoceros horn, and tortoiseshell (Wheatley 1961: 74, 296; Wang Gungwu 1998: 90, 109ff.). Wheatley also mentions the export of gold, tin, and parrots at the time of the Song dynasty. The handicraft production of Śrīwijaya (textiles and ceramics) remained modest in size: the thalassocracy was primarily a hub connecting the system's cores and its various peripheries. Palembang, however, manufactured and traded glass beads of the "Indo-Pacific" type. Other manufacturing centers were located on the Thai–Malay peninsula, for example at Takuapa.

To the west, the ships from Śrīwijaya sailed to India and Sri Lanka, and also to the Maldives, East Africa, the Comoros, and Madagascar. Ceramics from Southeast Asia dated to the ninth century have been unearthed in the Maldives (Carswell 1977). In 724, an embassy from Śrīwijaya presented "black" slaves to the Chinese court (as already noted, these black people may have originated in eastern Indonesia). The prosperity of Śrīwijaya during the ninth to tenth century highlights the solidity of exchange networks with India, during a period of global trade recession. In the east, the Śrīwijayan networks – in which the Sea Peoples played a prominent role – extended to the Sulawesi Sea and the Moluccas, the source of spices. A Buddha in the "Amarāvātī style" (now dated to the seventh to eighth century) has been excavated at Sikendeng (southern Sulawesi). Others have been found in eastern Java (Kota Blater), eastern Kalimantan (Kutei), and Palembang (Manguin 2010: 174).

The Thai–Malay Peninsula

Śrīwijaya controlled the mouths of the rivers of southeastern Sumatra and the shores of the Strait of Malacca. Its influence was felt as far as the isthmus of Kra in the Chaiya region, on the east coast of the Thai–Malay peninsula, where in 775, the king of Śrīwijaya had three temples built, devoted to the cult of Sākyamuni, Padmapāni, and Vajrapāni.¹⁵ The ancient Malay states such as Dandan and Panpan no longer sent embassies to China during the eighth century, evidence of the region's integration within the Śrīwijayan area. Besides Palembang and Jambi, the list of the so-called "conquests" made by the Chola king Rājendra reveals the significance of the Malay peninsula, where at least six places or kingdoms are named.

For the period between the eighth and tenth centuries, Arab sources point out the preeminence of a port called Kalāh, which has not been precisely located. According to the *Account of China and India*, it belonged to the kingdom of Zābag (Śrīwijaya). Abū

¹⁴ Schafer (1997: 163–165) points out the significance of aloeswood in religious rituals and medicine. This wood was used powdered, in perfumed liquid, and in "incense." A recipe for the preparation of incense for a Buddhist temple at Chang'an thus indicates the mixture of "1 1/2 ounces of aloeswood, 5 ounces of sandalwood, 1 ounce of storax, 1 ounce of onycha, 1/2 ounce of Borneo camphor and 1/2 ounce of musk" (Schafer 1997: 159). Belts and clothes, houses, and carriages were also perfumed.

¹⁵ Stela "from Ligor" (in fact from the Chaiya region). On this stela, see Coedès 1964a: 173; Jacq-Hergoualc'h *et al.* 1996; also Sastri 1949: 120–121; Southworth 2004c: 1167; and Mahdi 2008. Despite these buildings, the cultural influence of Śrīwijaya on the areas it "controlled" appears to have been limited. However, bronze statuettes of Avalokiteshvara have been discovered. One of these statuettes exhibits a Shaivite feature also found in Sumatra, Java, and Borneo; this syncretism developed when Śrīwijaya established links with the Pāla of Bengal (Jacq-Hergoualc'h *et al.* 1996: 393–395). Sumatra welcomed Tantric Buddhism, well developed in Bengal and in Orissa at this time.

Zayd (first quarter of the tenth century) writes: “Kalāh is the center of commerce for aloeswood, camphor, sandalwood, ivory, tin, ebony, baquam wood, and spices of all kinds . . . It is thither that the trading expeditions which start from Oman make their way, and from there they sail back to the country of the Arabs.”¹⁶ Its wealth in metal resources have often been remarked upon. Mas‘ūdī thus writes: “Near the countries of Kalāh and Srīwijaya, there are gold and silver mines.” Abū Dulaf, an Arab geographer from the tenth century who describes Kalāh as an interface between China and India, points out its wealth in tin and mentions a monetary system: “In the entire world, there does not exist such a tin mine as the one in this Kalāh. Their *dirham* [silver coin] weighs two-thirds of an ordinary *dirham*, which is called a *fāhri*. They have smaller coins, which they use for normal commerce” (Tibbitt 1979: 39–40; Wicks 1992: 223–224). Al-‘Aziz (during the late tenth century) mentions the presence of Muslim, Hindu, and Zoroastrian merchants (Wink 1990: 84). Written around 1060, the Chinese chronicle *Xintangshu* contains an item relating to Geluo (Keluo, Kolo) (the Kalāh of the Arab writers), ascribed to the eighth century. It notes that in Geluo “tax is levied at the rate of two silver *shu*,” which probably refers to a standard weight of metal and not to coinage; that, according to Wicks, places Geluo in the continental Asian tradition, where silver was predominant in the trading sphere, whereas gold dominated in insular Southeast Asia (Wheatley 1961: 55–56; Wicks 1992: 223).

Sites located on the Malay peninsula contain Chinese ceramics and coins from the Tang period as well as ceramics from western Asia, and glass of the same origin. The regions of Takuapa and Kedah have also yielded pottery from the Persian Gulf and – in greater quantities – Tang ceramics.¹⁷ “Islamic” glass has been excavated in the area of Kedah.¹⁸ Many Buddhist vestiges have also been discovered: the region also showed a Shaivite cult.¹⁹ At the time of Srīwijaya, the ports of Chaiya (site of Laem Pho), Nakhon Si Thammarat (Ligor), Satingphra, located in the north of the modern Songkhla, and Ko Kho Khao (Takuapa) were also significant centers on the peninsula. The two sites of Ko Kho Khao and Laem Pho, linked by a route crossing the peninsula, have yielded ceramics from the Persian Gulf, notably Sassano-Islamic ware, also found at Tha Rua, near Nakhon Si Thammarat (Glover 2002: 170); Islamic glass was also found. At Laem Pho, however, for 400 shards of pottery from western Asia, the archaeologists have excavated 4,000 shards of Chinese ceramics.²⁰ In Langkasuka,

¹⁶ Wheatley 1961: 217. See above. K. R. Hall (1992: 248) suggests that the name Kalāh may have been attributed to various places by Arab authors, according to how dominance shifted from one trade port to another on the Thai–Malay peninsula.

¹⁷ Nik Hassan Shuhaimi 1990: 69. In Sumatra, Tang ceramics have been found at Jambi, Palembang, in the Lampung region, and at Kota Cina.

¹⁸ Islamic glass has also been excavated at Khuan Lukpad (Dussubieux 2001: 201). S. J. Saitowitz and D. L. Reid (2001) have shown that “composite eye” beads from Sungai Mas and beads from Fustāt (Egypt) have the same chemical composition.

¹⁹ The vestiges date from the ninth century at the Sungai Mas site, which was probably the capital of the kingdom of Kedah at this time (Jacq-Hergoualc’h 1992b: 45). At the Pengkalan Bujang site located 10 km further north, remains of stupas dating from the sixth to seventh century have been unearthed, as well as Buddhist stelae from the fifth century.

²⁰ Laem Pho contains ten types of Chinese ceramics, as does Ko Kho Khao (here in smaller quantities), all dated to the ninth century. Three types of ceramics from western Asia have been recovered from Laem

a port-warehouse has been identified at Yarang. Note that the cultural vestiges of the peninsula belong to Buddhism and Hinduism.²¹ Locally produced or imported from Śrīwijaya and Java, Buddhist statues and statuettes show the influence of the Pāla or Pallava art. In peninsular Thailand, between the eighth and ninth centuries, one discerns a strong Vishnuite and sometimes Shaivite influence. Buddhism became predominant after the tenth century, with vestiges from the Chaiya region revealing – besides Śrīwijayan Buddhist influences – a stylistic mark from Cham art reflecting the existence of relations with Champa at this time.²²

The ports of Ko Kho Khao and Laem Pho declined in significance after 900, perhaps as a result of a global slowdown in trade or a shift of commercial nodes toward the south.²³

Continental Southeast Asia

In the Gulf of Bengal, a trade route followed the coasts, from Bengal to Burma and the Thai–Malay peninsula; other routes connected this peninsula with India or Sri Lanka. The strategic situation of the Thai–Malay peninsula, between the Bay of Bengal and the Gulf of Thailand, explains the development of smaller trade-oriented states, from the start of the Christian era at least, and the envy this region aroused, not only in Śrīwijaya and Java, but also in India, Sri Lanka, and continental Southeast Asia.

Land routes from Bengal and Burma to China were also important. A fortified citadel at Bhitargarh by the bank of the river Talma (Bangladesh) may reflect the flowering of an independent city-state west of Assam. It is not precisely dated, but Dutta (2016: 98) suggests a dating between the eighth and tenth centuries. A Pyu embassy to China in 802 took a land route, via Yunnan; in fact, as R. Mukherjee notes, “there is no record of a Burmese embassy traveling to China by sea before the Song period” (2011: 17).

In lower Burma, various small Mōn states were active, from the centers of Sudhammavati (Thaton) and Hamsavati (Pegu).²⁴ The Mōn from Burma may have issued silver coins of the conch/*srivatsa* type; they are poorly dated, however (Moore 2007: 144). Located between Burma and Bengal, from the sixth century until the late

Pho and five from Ko Kho Khao, which has also yielded fragments of glass vessels. Satingphra has yielded Chinese ceramics, but little glass (from western Asia) and beads, unlike Kedah (Leong Sau Heng 1990: 28–29).

²¹ A statue of Vishnu dated between 650 and 800 has been excavated from a sanctuary located on a hill at Ko Kho Khao. It is probably a local work and not a Pallava statue, as previously suggested. Statues of Vishnu carved in high relief found at Phra Narai (Takuapa) show an affinity with late Pallava art (between 750 and 850). Hindu sculptures dated prior to the Śrīwijayan period have been unearthed at Chaiya (see above). For the eighth and ninth centuries, Chaiya and the coast further south show influences from Mahāyāna Buddhism linked to Śrīwijaya. Votive Buddhist tablets have been excavated, notably at Chaiya, Nakhon Si Thammarat, Satingphra, Songkhla, and Kedah (Jacq Hergoualc’h *et al.* 1998: 248, 260, 290–292, 307, 312).

²² Three temples have been found in the Chaiya region, at Wat Keo, Wat Long, and Wat Phra Barommthath. These temples exhibit a composite architecture influenced by central Java, Champa, Cambodia, and Dvāravati (Jacq-Hergoualc’h *et al.* 1998).

²³ Nakhon Si Thammarat and Satingphra became more significant than Chaiya during the tenth and eleventh centuries; more importantly, Śrīwijaya and Java dominated the exchange networks.

²⁴ M. Aung-Thwin, however, has questioned the existence of Mōn states in lower Burma at such an early date (see below).

tenth century, the kingdom of Arakan, ruled by a Chandra dynasty, was oriented toward maritime trade. It too issued silver coins, of the conch/*śrīvatsa* type, and later of the bull/*trishūla* type (Wicks 1992: 82).²⁵ The trade routes in the Gulf of Thailand, from Tāmbraṅga and other places, went to the Mōn kingdom of Dvāravatī and its port of Ku Bua, at the junction of various land routes, notably the route of the Three Pagodas Pass.

Dvāravatī: A System of City-States?

The history of this “kingdom” is still poorly understood; Dvāravatī may have been formed by a range of small states competing and/or cooperating, with one or another of those states at times prevailing.²⁶ Dvāravatī was mentioned by the Chinese pilgrim Xuanzang in 648 under the name Duoluobodi. It sent tributes to the Chinese court in 638 and 649. A Chinese encyclopedia, the *Tongdian*, also mentions “Touhe” (Dvāravatī) during the ninth century: “There are six market-cities in Touhe. For commercial transactions, they always use silver coins, small like an elmseed in appearance.” Silver coins bearing the inscription “King Sri Dvāravatī who is fully meritorious,” written in South Indian characters, have been excavated under a sanctuary in the town of Nakhon Pathom (Indrawooth 2004: 129). This town, covering 600 hectares, was probably the capital of a kingdom which, during the eighth century, associated Buddhism – predominant at the time – and Vishnuism.²⁷ Lopburi (Lavapura), Chansen, Pong Tuk, and Sri Thap, which show Gupta and post-Gupta influences, were other significant cities of the Dvāravatī area, as well as the ports of Ku Bua and U Thong.²⁸ U Thong may have been the first capital of the Dvāravatī area. Long-distance trade involved other sites, for example Muang Sri Mahosot, which shows links with India from as early as the first half of the first millennium, and Muang Phra Rot, where ceramics from the Persian Gulf and China dating to between the eighth and eleventh centuries have been excavated (Glover 2002: 170; Indrawooth 2004: 132). These ceramics from western Asia may have come from the Thai–Malay peninsula,

²⁵ These coins, and the discoveries of various hoards in northern India, call into question the idea of demonetization in India and neighboring regions during this period, as suggested by some authors (see above). One notes “changes in the metrology, shape and execution of the Harikela [eastern Bengal] coinage from the ninth century onward, showing conformities to the reformed Arabic currency of the same time” (Chakravarti 2001a: 92). Abbasid gold coins have been unearthed in southeastern Bengal.

²⁶ Manguin (2000d: 175) sees a “structure fragmented into multiple urbanized centers” and suggests Funan as a possible origin for this model. Higham (2002: 263) draws a parallel with Zhenla; in the two areas, “periods of unity [of a very short duration in the case of Zhenla] were [probably] punctuated by episodes of fragmentation and regional autonomy.” Nakhon Pathom, however, was much larger than the other cities (Mudar 1999).

²⁷ Shaivite influences can also be seen, for example at U Thong (Higham 2002: 257). Various inscriptions, in Sanskrit, in Pali, or in Mōn, have been discovered. An inscription at Lopburi dating from the middle of the eighth century thus mentions donations of slaves and cattle to a monastery.

²⁸ Indian influences coming from the Pallava country, Deccan, Bengal, and even Gujarat are noticeable in the remains of Buddhist buildings, in ceramics (the manufacture of *kendi* and *kundika*, linked to cults), on royal insignia carved in stone, and in statuary. These influences reveal the presence of Shaivite or Vishnuite sects, along with Buddhists from the Mahāyāna and Hīnayāna traditions (Indrawooth 2004: 138–142). Scholars made use of three languages: Sanskrit, Pali, and Old Mōn.

or by land route, from Burma, via the Three Pagodas Pass. A stone seal found at Nakhon Pathom features a two-masted ship with an outrigger (Ray 2006: 127). Silver coins have been discovered at many sites (Indrawooth 2004: 136). As with those from other Southeast Asian regions, the coins from Dvāravatī use Indian symbols of kingship and prosperity: conch, rising sun, *srivatsa*, and overflowing vase. Dvāravatī seems to have died out during the ninth century,²⁹ when it may have been incorporated into an expanding Khmer state. In parallel, coinage disappeared in this region during the ninth or tenth century.³⁰

The Emergence of the Khmer State

During the early eighth century, a Khmer state developed, from the site of Banteay Prei Nokor, east of the Mekong.³¹ “This huge site was probably the capital from which Jayavarman II began his odyssey westward to found the Kingdom of Angkor” (Higham 2014: 295). Angkor was an agrarian state, whose elites supported Shaivism.³² “The Brahmin and Brahmanic establishments,” notes Heesterman, “are well in line with the ‘verticalization’ of relationships in a rising agrarian kingdom, while the spread of Buddhism easily fits in with widespread ‘horizontal’ linkages of an empire based on long distance trade,” such as Srīwijaya.³³ The Khmer kingdom would become a major regional power at the beginning of the eleventh century, but, curiously, it did not develop any metallic currency, or even – apparently – any standard measure of value (Wicks 1992: 193ff.).

It is significant, however, that the first local coins, influenced by types from Burma or Thailand further north, appeared on both sides of the Kra Isthmus, crossed by trans-peninsular paths.³⁴

²⁹ Lopburi asserted its independence during the seventh and eighth centuries. The *History of the Song Dynasty* refers to Lavo and not to Dvāravatī, in 1001. Moreover, the states of Thaton and of Pegu may have been affected during the ninth century by the events in upper Burma, where troops from Nanzhao seized the capital of the Pyu, Sriksheṭṭra, in 832. It is possible that the name *Tircul* found in the Arab chronicles refers to the Pyu (Wicks 1992: 116). According to tradition, Pagan was founded as the capital of a Burmese kingdom in 849, but we do not have evidence concerning Pagan prior to the eleventh century.

³⁰ Wicks 1992: 153. Besides rising sun/*srivatsa* silver coins, the most significant coins used and, probably, issued in the Dvāravatī area were conch/temple type coins with *vajra* (Wicks 1992: 162).

³¹ Another center has been found near Angkor, at the site of Prei Khmeng.

³² The usual date suggested for the beginnings of the Khmer “Angkorian” state was c. 802. Recent discoveries show the existence of a first “Angkorian” capital in the early eighth century (Pottier 2005). Inscriptions in Sanskrit and Khmer, referring to grants to temples, appeared in the seventh century within the context of smaller states sharing the area that the Chinese texts call “Zhenla.” As noted above, a centralized authority was consolidated at this time at Ishanapura and later at Purandarapura, with the setting up of an administration (Higham 2002: 250–251). A small Buddhist state developed in the Mun valley, in connection with the Dvāravatī area (site of Muang Sema) (Higham 2002: 264). Further north, in the Chi valley, the site of Muang Fa Daet covered 171 ha.

³³ Heesterman 1989: 10. Brahmanism also progressed on Java, where profits from trade were invested in agriculture, triggering the rise of local dynasties (see below). Heesterman correctly emphasizes the complementarity between the agricultural villages of the interior and coastal merchants (1989: 13).

³⁴ Jacq-Hergoualc’h *et al.* (1998: 292), however, are skeptical about the importance of transpeninsular routes, at least during the ninth century.

Champa

The trade routes toward China went through Champa, which had regular contacts with Śrīwijaya and Java. Between the eighth and tenth centuries, Champa developed an architecture that has been termed “Indo-Javanese,” influenced by Tantric Buddhism and showing a synthesis between Shaivism and Buddhism.³⁵ This coast was weakly integrated, politically: various centers of power coexisted and periodically shifted among the fluvial systems, as was the case in the Malay world. The Chinese Jiadan (eighth to ninth century) thus mentions a series of kingdoms along the Vietnamese coast. Pānduranga (Phan Rang) represented a focus of activity during the eighth century, as did Kauṭhāra in the Nha Trang region, where sanctuaries were built in the ceremonial center of Po Nagar from the eighth century onward. The last reference to the polity named Linyi in the Chinese texts “appeared in 757.” Around 875 and in the century that followed, these texts “recognized Champa in the name Zhan Cheng” (Vickery 2005: 11) (probably the Da Nang region). Tra Kieu does not seem to have been occupied during that period (Southworth and Prior 2010: 191); we do not know where the capital of this new power was located (Southworth, p.c.). The ceremonial center of My Son, upstream from Tra Kieu, appears to have held particular importance.³⁶ Sassano-Islamic pottery has been discovered at Tra Kieu and Trien Trang (between Tra Kieu and My Son), where Abbasid dinars have also been excavated (Glover 2002: 166). South of Tra Kieu, the island of Cu Lao Cham (province of Quang Nam) has yielded beads, Islamic glass, ceramics from the Persian Gulf, and Chinese Tang ceramics (Glover 2002: 171).³⁷ Close links were maintained with China: the Cham kings sent at least twenty trade embassies to that country between 650 and 750 (Southworth 2004a: 225). Imported goods reveal the contacts of Chams with both Indonesia and the Highlands of the Indochinese interior: there were camphor and various resins, aloeswood, sandalwood, cinnamon, rhinoceros horns, cardamom, kingfisher feathers, and elephant tusks. Champa redistributed Chinese products in Southeast Asia. Trade, however, declined after 750 due to corruption at Guangzhou and political problems in the region. Long Bien, located in the Red River delta, then emerged as a commercial regional and international center. Northern Vietnam, ruled by China since the Han period, regained its independence in 939. Dinh (968–981) issued the first Vietnamese coinage, similar to the Chinese copper coinage. The Vietnamese ruler Le Hoan Le Dai Hanh captured part of Champa, destroying Tra Kieu in 982. Some Chams fled to the Malay peninsula and northern Sumatra (Thurgood 1999; Blust 2006). Vijaya (Bin Dinh region) then rose to dominance (c. 1000). The fortified site of Caban, which covers 155 ha, probably corresponds to the capital of this region (Higham 2002: 272). During the tenth and eleventh centuries,

³⁵ Relations were not always peaceful: in 774, a Javanese raid destroyed a temple at Po Nagar.

³⁶ Jacq-Hergoualc’h *et al.* 1998: 272. One indication of the suzerainty of a town was “the holding of a holy place where the god Shiva resides, master of the kingdom.” At My Son, the building of sanctuaries begun during the fourth to fifth century, progressed during the seventh century, and continued on up until the late eleventh century (Higham 2002: 271).

³⁷ In addition, a shard from western Asia has been unearthed on Con Dau Island (southern Vietnam, Vung Tau province) (Glover 2002: 173).

Pānduranga (Phan Rang), where there was a Muslim community in contact with Java, was another major trade center (Hall 1992: 253, 258).

The Javanese Kingdoms: Rice Cultivation and Long-Distance Trade

As well as Srīwijaya, Java played a key role at supraregional level. Kingdoms influenced by Indian religious concepts formed. A Sanskrit inscription in the Shaivite temple of Candi Canggal (Gunung Wukir) (732) to the southeast of Borobudur (central Java) commemorates the founding of a kingdom by a man called Sanjaya.³⁸ Between 750 and 775, temples devoted to Shiva were built on the Dieng plateau and, in the east, at Gedong Songo (Soekmono [1979], however, identifies a first phase of construction between c. 650 and 730). At the same time, the sanctuaries of Malang bear testimony to the importance of eastern Java. Soon afterwards, the dynasty of the Sailendra emerged in central Java.³⁹ It ruled an agrarian state that was also involved in maritime trade. It was probably in close contact with Srīwijaya, which imported rice from Java.⁴⁰ “The Sailendras had access to some of the key ports of the northern coast [of Java] and clearly had commercial and marital ties with the rulers of the maritime empire of Srīwijaya” (Southworth 2004c: 1167). For Coedès, the name “king of the mountain” for their kings, “is an equivalent of (Çiva) Giriça, and perhaps expresses an Indian adaptation of Indonesian beliefs which place the residences of gods on mountains” (Coedès 1968: 88).⁴¹ The reign of the Sailendra was marked by a spread of Buddhism of the Great Vehicle school, which coincided with the rise of the Pāla dynasty in Bengal and Magadha. The mountain-temple of Borobudur, influenced by the Late Gupta style of western Central India and Pallava temples,⁴² is dated from this period as well as Candi Sewu and Ratuboko, near Prambanan, where an inscription (dated to 792) in a Buddhist

³⁸ The era of Sanjaya began in 717. The inscription at Mantyasih from King Balitung (dated to 907), which claimed his link with a lineage (Amrati) derived from Sanjaya, names the latter Rakai Mataram (Coedès 1964a: 235). The second prince of this lineage, Panangkaran, is given by an inscription at Kalasan (dated to 778) as being under the suzerainty of the Sailendra (Coedès 1964a: 168–169). Based on an inscription at Canggal, Mahdi (2008: 126) has recently supported the idea that Sanjaya was the son of the sister of the king of Jambi, vanquished by Srīwijaya in 683, who took refuge on Java. There, Sanjaya is said to have rebuilt the Hindu kingdom of Yavadvipa, and then attacked Srīwijaya; this interpretation, however, remains hypothetical.

³⁹ The first reference to the Sailendra occurs in an inscription in Old Malay discovered at Sojomerto, dated to the early eighth century; it mentions a Dapunta Selendra. Dapunta was a term used for a ruler who did not have the rank of a king: according to Mahdi, the region of Java where these Sailendra lived was under the suzerainty of Srīwijaya at the time (2008: 131), but it was more likely controlled by a Javanese kingdom.

⁴⁰ De Casparis has noted the expression of some continuity between Srīwijaya and Java in ancient inscriptions, for example in the field of administrative practices (Wicks 1992: 230). The Javanese kingdom(s) of the Kedu plain did not directly control the ports of the northern coast.

⁴¹ Cf. Barrett-Jones 1984: 186; Lombard 1990, 11: 22. The title of “king of the mountain,” according to Coedès, may have been borrowed from the ancient kings of Funan. Recent research, however, does not confirm this hypothesis (Southworth 2004c: 1168), and Vickery (2003–2004) has cast doubt on the veracity of this title for the rulers of Funan (see above).

⁴² Borobudur combines symbolic elements of various origins. Its multiple terraces are reminiscent of the prehistoric religious sites of Indonesia.

monastery may indicate a link with a Singhalese sect. Four reliefs at the Borobudur temple feature ships with or without outriggers.⁴³ Borobudur became a center of pilgrimage, thus expressing the prominent status of central Java. The inscription of Kelurak (782) mentions the installation of a statue of the Bodhisattva Manjusri by a monk from Bengal (Wisseman Christie 2001: 36). Influences did not originate solely on the eastern coast of India. “An inscription at the Plaosan temple in central Java (c. AD 800) explicitly refers to the ‘constant flow of the people from Gurjaradesha [Gujarat and adjacent regions]’ – due to whom this temple had been built” (Kulke and Rothermund 1998: 158).⁴⁴ (Gurjaradesa refers either to Gujarat or to the territory of the Gurjara-Pratihara) (De Casparis 2000: 63). “The appearance of a silver Sandalwood Flower coinage in south central Java at the end of the eighth century provides the earliest indication of monetized transactions in insular Southeast Asia” (Wicks 1992: 243).⁴⁵ In parallel, one notes inscriptions “relating to public or private and financial matters,” along with the earliest inscriptions known in Old Javanese (Wisseman Christie 2001: 37).

During this period, the Chinese chronicles reveal the involvement of Java in long-distance trade networks, mentioning the kingdom of Heling (Ho-ling) (Walaing,⁴⁶ probably distinct from the kingdom of Mataram, which may finally have absorbed Walaing) (Wisseman Christie 2001: 35; see below). Heling sent three embassies to China during the seventh century (640, 648, 666), two during the eighth century (767 and 768),⁴⁷ and again three during the ninth century (813, 815, 818). Two “black” “Seng-chih”

⁴³ Two of them figure in Lombard 1990, 11: 23. Depictions of boats are rare for this period; Manguin (1993: 263) signals one on a stucco relief at U Thong, and another on a seal from Dvāravati found at Nakhon Pathom. The representations at Borobudur depict “tripod (or bipod) masts,” quarter-rudders, and “the use of two types of sails, the canted square-sail and a kind of lugsail” (1993: 263).

⁴⁴ “Indeed, the temple’s sculptures show a striking similarity with those of the late Buddhist caves of Ajanta and Ellora” (Manguin 1993: 263.).

⁴⁵ Silver coins weighing 2.4 g (*māsa*). These first coins, however, do not appear to have been used in trade; “this early coinage was primarily intended to facilitate administrative and religious transfers” (Wicks 1992: 243). The coins bore an ancient Nāgarī script, thus showing a Pāla influence (the Nāgarī script appeared during the eighth century in northeastern India). Four stone inscriptions using this script are known in Java (inscriptions of Kalasan and Kelurak, dated to 778 and 782), all connected to the Sailendra dynasty. Stamped silver ingots were also in use for transactions (Wicks 1992: 249). They show the sandalwood flower and flowing vase designs. In addition, it is possible that gold bracelets played a monetary role (Wicks 1992: 263). Market transactions may have developed on a monetary basis from the tenth century onward; at that time, units of value of lower denomination were present.

⁴⁶ Located in the region of Yogyakarta according to Damais 1964: 123. Wisseman Christie (1998b: 346), however, considers Heling as “a coastal state” (northern Java).

⁴⁷ According to Mahdi, the Heling embassies to China stopped between 666 and 767 due to the dominance of Srīwijaya over this state. Curiously, Mahdi locates Heling on the Malay peninsula (2008: 127); he states that the Chinese term renders the Malay word Keling, which he locates at Yarang. In addition, he relates Heling (=Shepo) to “the ‘land of Jāwa’ of the 686 CE Kota Kapur inscription” (2008: n. 49). On this point, Mahdi’s interpretation is founded on a Sundanese chronicle which dates only from the sixteenth century, the *Carita Parahiyangan*; according to this text, Sanjaya subjugated the rulers who surrounded his kingdom, and then he crossed the sea toward Malayu: “he attacked Khmer . . . and Keling, Sang Srīwijaya was defeated, Barus was attacked,” as well as “China.” The *Carita Parahiyangan* writes of “Keling Patani”: it appears to locate Keling in Malaysia. An attack on Cambodia is indirectly confirmed by an inscription at Sodok Kak Thom: at the coronation of Jayavarman, in 802, a Brahmin officiated at a ceremony which freed Cambodia from its oath of allegiance to Yava[dvipa]. As regards China, the Vietnamese Annals *Dai Viet Su Ky* reveal that in 767 the district of Tran-nam and its main city were attacked and looted by

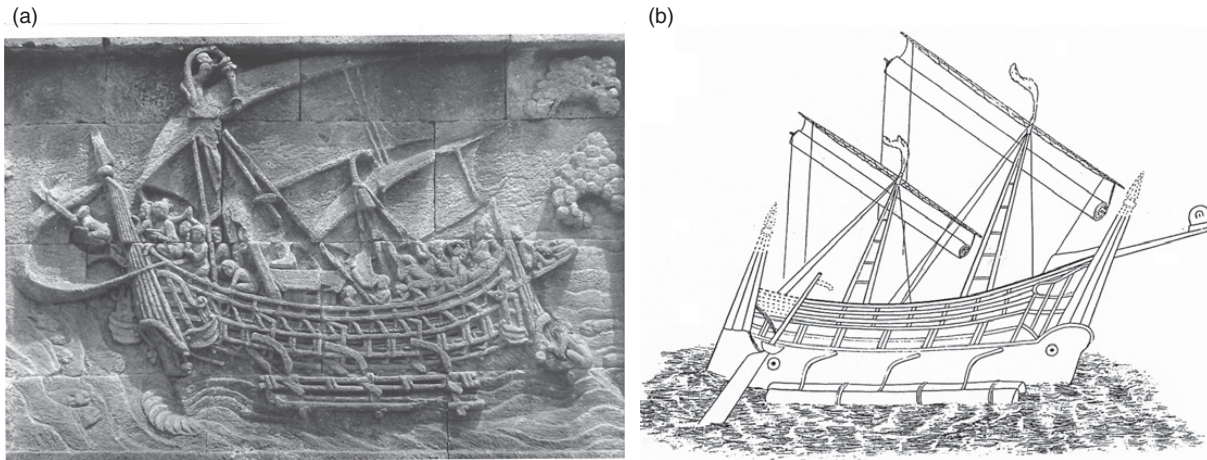


Figure 4.1 (a) Fore-and-aft rigged vessel with outrigger, showing two tripod masts, and a bowsprit sail at the prow. Temple of Borobudur, eighth century. © École Française d'Extrême-Orient. (b) Drawing, J. Hornell 1946

women (Old Malay *jengī*, cf. Arabo-Persian Zang/Zanj)⁴⁸ were sent to China in 614, and the embassy of 813 again brought four African (or Papuan?) slaves (see above). The term *jengī* or *jangī* is present in Javanese inscriptions of 860 and 919.⁴⁹ The Chinese went to Heling: according to Yijing, the monk Huining studied Buddhism there under the rule of a Javanese master for three years (664–667), and Jiadan (between 785 and 805) writes: “Four or five days’ sail from Fo-shih [Śrīwijaya], to the east, lies the kingdom of Ho-ling, which is the largest of the islands in the south.” Heling disappears from the Chinese Annals from 818; it was “Shepo” (Mataram) which sent embassies (820, 831, and another between 860 and 873). It seems that Walaing was incorporated into the extensive state of Mataram, where Shaivite princes “who had emigrated to the east” regained power (Coedès 1968: 202, 234). The capital of the kingdom of Mataram was located at Mdang, in the region of Yogyakarta.⁵⁰ The *Xintangshu* states that “Heling is also called Shepo” (Damais 1964: 128, 129).

The two kingdoms merged at an uncertain date, and the relations between Mataram and Heling remain difficult to understand, as do those between the Sanjaya and Sailendra dynasties. The disagreements between scholars reflect the difficulty in connecting the names found in the Chinese chronicles with those of the Javanese inscriptions, as L.-C. Damais has noted (1964: 141). Walaing is still mentioned as a political entity in 856, and later as a toponym linked to the holders of political functions in 863, 907, between 912 and 919, in 929 and 930 (Damais 1964: 121, 124, 132–135).

Con-lon people (Chinese Kun-lun) and Xa-ba (Chinese Shepo < *Jaba) (at this time, Tonkin was under China’s control) (Mahdi 2008: 129). Another raid struck Champa in 782. Protests about these raids were sent to the Chinese court.

⁴⁸ The Old Malay *jangi/jangī* may reflect the influence of a “West-Arabic dialect that featured velar realisation of ġ as g” (Mahdi 2008: 116 n. 17).

⁴⁹ Inscriptions from Kancana (860, eastern Java) and Lintakan (with “the name Si Janggi, ‘The Zeng’”) (919, central Java) (Lombard 1990, 11: 321 n. 147). The same term is used with the variants *jangi* and *jeñi* in other Javanese inscriptions dated to 1135, 1140, and 1294 (Ferrand 1924: 241).

⁵⁰ Some researchers – based on no strong evidence – argue that the capital of the state of Mataram was located at Ratuboko (see Soebadio 2001).

As Heling disappeared as an independent state, the Sailendra dynasty was removed from power. The reign of Rakai Pikatan (847–855) – a Hindu ruler whom various inscriptions note as belonging to the “Sanjaya dynasty” (see Wisseman Christie 2001: 27) – at the head of the kingdom of Mataram may represent the merging of the two ruling lines, through his marriage with a woman from the Sailendra dynasty. A violent dispute seems to have set him against Bālaputra, a member of this dynasty, who fled to Sumatra (De Casparis 1956). Bālaputra then reigned at Palembang, his mother’s birth place; he is mentioned as a donor of the Buddhist monastery of Nālandā, in Bengal, in 860. Rakai Pikatan undertook the construction of the temples of Candi Loro Jonggrang at Prambanan in the middle of the ninth century:⁵¹ Hindu cults increased in prominence (Hindu *bhakti* cults were probably “exported” to Southeast Asia at this time [Stein 2002]). The temple was at the center of the politico-religious system, giving expression to the principles and hierarchies that formed the foundation of the kingdom. One notes increasing numbers of inscriptions relating to grants or restorations of rights for the benefit of religious foundations. Because of declining trade in the China Sea, it may have become more difficult to acquire prestige goods, which explains the search for other – religious – sources of legitimacy (Wisseman Christie 2001: 39). As was often the case in Southeast Asian kingdoms, the kingdom was organized as a representation of the universe. According to the dynastic chronicle the *New History of the Tang*, the Javanese kingdom in the ninth century was divided into twenty-eight provinces; their governors and the four ministers numbered thirty-two, in reference to the thirty-two gods of Indra’s realm (Heine-Geldern 1942: 21). The adherence to Indian religions conferred a superior status on the king, recognized by the agrarian elites. Neither rice nor kingship, however, constituted “the gifts of indianization,” but “the new ideology, whether Hindu or Buddhist . . . , strongly helped federate regions and contributed to the emergence” of a concept of sovereignty in which a king who was master of the hydraulic system organized the territory, as can be observed at Angkor and Sri Lanka.⁵² As in the Indian Pallava and Chola kingdoms, in parallel to the support given to *brahmadēya* communities, the kings and the Javanese elites encouraged the development of irrigation systems. A large part of the state revenues came from rice cultivation. The king ensured a limited redistribution of imported luxury goods, and this helped forge alliance networks.⁵³

⁵¹ Coedès 1964a: 175–176. Coedès has noted that the “*maharaja* [‘great king’] of Zabag” mentioned by Ibn Khurdādhbeh probably refers to the Sailendra ruler of Java, whereas in later Arab authors, it may refer to the rulers of Srīwijaya. There may have been intermarriages between the royal court of Srīwijaya and the Sailendra; these Sailendra would later have moved to Sumatra when other lineages, which were Hindu, gained preeminence in central Java. Probably built by Rakai Pikatan, the temples of Prambanan, devoted to Shiva, Vishnu, and Brahma, also show Buddhist influences. These temples represent a crystallization of the divine and a manifestation of the king’s power.

⁵² Lombard 1990, 111: 19. According to Wisseman Christie (1995: 255), “the Javanese states borrowed extensively from the broader Indian religious tradition in a manner which suggests a self-conscious balancing of ideas thought to be useful for the maintenance of power in economies at once agrarian and mercantile.” In addition, in Indonesia, as in Cambodia, syncretisms developed with local cults.

⁵³ In the kingdom of eastern Java (from 927 on), as well, the king appears to have controlled the importation of luxury goods.

Toward the end of the ninth and the early tenth century, one observes a transformation of the Javanese economy, with a standardization of weights and measures, and increased monetization.⁵⁴ Mataram was the first maritime Southeast Asian state to develop a monetary system, copied soon after by other regions (Wisseman Christie 1995; 1999: 222). Mataram combined agricultural advances with long-distance trade,⁵⁵ and encouraged the planting of new rice fields. Many *sīma* charters presenting tax exemptions and grants “stipulated that brush or swidden land should be converted to *sawah* (wet rice fields),” along routes leading to the north coast, and also in eastern Java (Wisseman Christie 2001: 44). By the 850s, the kingdom included the Brantas River delta in eastern Java, a region that was well situated along the trade route for spices (Moluccas) and precious wood (Timor). In exchange for the products of eastern Indonesia, Java mainly offered rice and textiles (the cotton plant was cultivated in eastern Java and Bali). The first large-scale works for irrigating rice fields go back to the tenth century in the Brantas valley. In a text from 916, Abū Zayd mentions the wealth of Mataram (Tibbetts 1979: 33; Wisseman Christie 2001: 49). Around 927, the capital of the Mataram kingdom shifted to eastern Java. The eruption of the Merapi volcano, located north of Yogyakarta, may have been one cause for this shift,⁵⁶ which may also have resulted from economic choices, along with efforts to gain control over the spice trade route and the rice-growing plains southwest of Surabaya (Kulke 2012: 120). As Wisseman Christie notes (2001: 49), this period corresponds to a trade revival in the China Sea. The inscription at Palebuhan (927) indicates that Goreng Gareng, at the mouth of the Brantas, had thirty-five ships anchored in its port at that time. The king used to send Javanese as well as Sinhalese, South Indian, and Burmese merchants into the countryside to collect taxes.⁵⁷ The emergence of this new kingdom in eastern Java challenged the hegemony of Śrīwijaya along the trade routes, and a clash between the two states appears to have been inevitable (see below).

Mataram’s involvement in the spice trade from the Moluccas led to an increasing Javanese influence on Bali and other islands during the tenth century. Various coins were minted, between Sumatra and Bali, and on Luzon, in the north, modeled on the currency from Mataram.⁵⁸ The coins of Mataram were not mere copies of Indian coins,

⁵⁴ Wicks 1992: 251–252, 258, 297. See below. Ritual transactions were using money as early as the eighth and ninth centuries. Several terms with money-like connotations appeared in inscriptions dated to the 870s. Central Java has yielded most of the discoveries of early coins (Wicks 1992: 265).

⁵⁵ Unfortunately, the links of Mataram with the cities of the northern coast are still poorly understood (Manguin 2000d: 155).

⁵⁶ “There has been much speculation,” as Lombard notes (1990, 111: 18), “about the reasons for this shift,” which was in fact begun under King Dyah Balitung at the end of the ninth century: was this shift due to natural disaster (volcanic eruption), war, or a wish to bring the capital closer to maritime routes, where trade was then expanding? The latter explanation has been put forward by Hall (1992: 208ff.) and Wisseman Christie (1999: 225), who further emphasizes that the involvement of Mataram in the economic rise of the tenth century coincided with the abandonment of monumental religious architecture. Wisseman Christie also notes a period of political turmoil at the end of the ninth century, occurring against a background of strong seismic and volcanic activity (2001: 47).

⁵⁷ Hall 1992: 210. At least part of the taxes must have been collected in gold and silver (Wicks 1992: 267).

⁵⁸ Wisseman Christie 1999: 223. The Balinese monetary system appears to have been already well developed in the first known inscriptions in Old Balinese or Sanskrit, during the ninth century. During the tenth and eleventh centuries, the terms *māṣaka* and *kupang* became monetary values, independent of a metallic

but show influences from northeastern India (the use of Nāgarī script) and South India (the dice-shaped Javanese gold coins recall the gold spherules of South India) (Wisseman Christie 1999: 231).⁵⁹ Made of silver, silver alloy, or gold, they feature the “sandalwood flower,” a design already used for the first coins. The coins bear the sign *mā*, an abbreviation of *māṣa*, a unit of weight and basic unit of the monetary system of Mataram (this name, of Sanskrit origin, refers to *Vigna radiata* [L.] Wilczek).⁶⁰ Several denominations are known. The *kupang* unit of weight (1/4 of *māṣa*) first appeared in port regions, which suggests that monetization was linked to international trade.⁶¹ The weights of various standardized units and sometimes the names given to those weights also reveal Indian influences (several weights, however, bear indigenous names).⁶² There was no local source for silver: this metal was imported from China, and probably also from Vietnam.⁶³

An Indian influence is also evident in the textile industry and in clothing. The terms used in Old Javanese⁶⁴ for red (*rangga*) and blue (*angsit*) fabrics derive from Sanskrit terms (*rāga*, “red,” and *asita*, “dark, black, blue”). The Javanese *yuga*, *yugala*, which refers to a fabric of double width worn in ceremonies by men of high status (a borrowing from India) derives from the Sanskrit. Statuary and inscriptions reveal innovations in textile designs and manufacturing techniques during the tenth and eleventh through twelfth centuries: examples of these can be found in India at this time. While textiles were imported from India, local productions imitated Indian fabrics. Changes to looms during the tenth century made the weaving of thinner fabrics possible.

Trade also developed with China, noted for its importation of spices. Chinese ceramics have been excavated in Java dating from the ninth and tenth centuries.⁶⁵ Tang pottery has also been found in the vicinity of temples built by the state of Mataram, despite a relative decline in commerce in the China Sea at the end of the eighth century and during the ninth century.⁶⁶

referent (Wicks 1992: 275). Bali was active in trade, as the inscriptions on copper from Julah reveal; they give a series of names for vessels, *parahu*, and for larger vessels: *lancang*, *jong*, and *babitra* (Ardika 1991: 244; Ray 2003: 205).

⁵⁹ As already noted, the Nāgarī script originated in northeastern India. The Javanese Kawi script derives from the Pallava script of South India.

⁶⁰ The Malay *emas*, *mas*, refers to the weight of one grain of *Vigna radiata* (L.) Wilczek or *Phaseolus mungo* (L.) Hepper, and to the corresponding weight in gold. The *māṣa* (2.4 g) was divided into two *atak* (the Javanese name for *Vigna radiata*?) and four *kupang*. The smallest unit of the system was the weight of one *saga* (0.1 gram), the name for *Abrus precatorius* L. The seed of *Abrus precatorius* is also a weight unit in India.

⁶¹ Wicks 1992: 254. For smaller transactions, on local markets, rice and other means of exchange were probably used.

⁶² In use between the ninth and thirteenth centuries in Java and Bali, this system, as Wicks notes, “while basically Indian in form, reveals a number of indigenous elements” (Wicks 1992: 252).

⁶³ The treasure from Wonoboyo, which belonged to a branch of the royal family, has yielded silver bowls from Tang China (Wisseman Christie 1999: 232).

⁶⁴ Javanese became a written language during the tenth century. Scholars undertook the translation of great Indian works such as the *Mahābhārata* and the *Rāmāyana*.

⁶⁵ Moreover, Chinese ceramics have been unearthed on the northern coast of Mindanao, along maritime routes connecting China and the Moluccas.

⁶⁶ Wisseman Christie 1999: 222. The Chinese hostility to foreign influences was clearly apparent toward the middle of the ninth century and slightly later (see above).

The emergence of Javanese powers represented a direct threat for Srīwijaya. The economic balance of power shifted to the Javanese ports, at the expense of Srīwijaya (Wisseman Christie 1995: 263). While China welcomed embassies from Shepo at the end of the ninth century, no embassy from Srīwijaya was recorded at this time (some authors have suggested that the center of the thalassocracy of Srīwijaya at that time was located on the Malay peninsula). By contrast, Srīwijaya sent various missions to China during the tenth century: in 904/5, prior to the demise of the Tang dynasty (906); in 960, shortly after China's reunification by the Song; in 962, and many more times between 971 and 988; six additional delegations were sent to China between 1003 and 1018.⁶⁷ Srīwijaya then appears to have attempted to conciliate the two major maritime powers of China and the Chola state (see above) and may have benefited from the fact that Arabs and Persians no longer sailed to China, but stopped at Kalah, a port then under the control of Srīwijaya (Wolters 1958). From 905, the Srīwijayan kingdom was called "Sanfoqi" by the Chinese, signaling a "shift of the center of political power from Palembang to Jambi, within the context of adverse relationships with Java" (Manguin 2004).

Relations between Srīwijaya and eastern Java appear to have descended rapidly into conflict. Under the reign of the East Javanese king Sindok (924–947), Srīwijaya launched an armed expedition, with little success. In 992, Java sent an embassy to China,⁶⁸ and later attacked Srīwijaya, which retaliated with a devastating raid in 1016. The Srīwijayan embassy to China in 1017 offered large quantities of incense, pepper, sandalwood, cloves, and nutmeg: wealth derived from plunder brought back from eastern Java (Wolters 1958: 604). Srīwijaya would later attempt a reconciliation with Java.

Java may also have pursued an aggressive policy toward networks further east. One observes the appearance on Bali of fortified ports, built during the ninth and tenth centuries, as protection against maritime raids.

Javanese epigraphy dated to the tenth century refers to the presence of Indians and people from other countries on the island. An inscription at Kaladi (909 CE), written in Old Javanese, thus mentions *Kling* (Kalingas), *Arya* (Hindus from northern India), *Singhala* (Sinhalese), Dravidians, *Pandikira* (Pāndya and Chera), Chams, *Ramman* (Mōn), and *Kmir* (Khmers).⁶⁹ Several inscriptions use the term *banigrāma* (Sanskrit *vanigrama*) referring to a merchant guild, for example at Kaladi and Kambang Sri (1042 CE) in eastern Java, and at Sembiran B and A II (951 and 975) in inscriptions in Old

⁶⁷ Wang Gungwu 1958: 123; Kulke and Rothermund 1998: 123.

⁶⁸ Hirth and Rockhill 1911: 77, quoting Zhao Rugua. The situation in Sumatra prevented an emissary from Srīwijaya who had arrived in China in 988 from sailing back to his country.

⁶⁹ Lombard 1990, 11: 22; Wisseman Christie 1999: 244. The first inscription that gave a similar list of foreigners is that of Kalirungan, in central Java (in 883). These merchants seem to have been employed as "tax collectors." Various inscriptions refer to *sima* estates granted to Shaivite or Buddhist men; these estates were exempted from taxation and corvées (for various examples, see Wisseman Christie 1999: 250ff.). Lombard (1990) also notes an inscription from Kuṭi (840 CE), which mentions the various origins of "servants" (it survives only in a copy dated to the fourteenth century, Wisseman Christie 1999: 269 n. 90).

Balinese.⁷⁰ An epigraph at Bebetin (896) on Bali mentions *banyāga* merchants. Also among the “foreigners” on Java were Malays from Srīwijaya. The discovery of six inscriptions in Old Malay in central Java should probably be interpreted not as indicating control by Srīwijaya over this region, but as the presence, instead, of active Malay merchant networks, within the context of relations between Srīwijaya and the Sailendra dynasty.⁷¹ The oldest inscription dates to 792; the more recent goes back to the middle of the ninth century. A text written on a copper plate dated to 900 has been found at Laguna, in southern Luzon (Philippines); written in Old Tagalog influenced by the Malay language, it refers to a place called Mdang, the name of the capital of Java, and mentions “a debt calculated in gold in the same weight units that were in use in Java” (Wisseman Christie 2001: 49). Thus, at the end of the eighth century, “the process that would make Malay the *lingua franca* of the Insulindian Archipelago had begun” (Lombard 1990, 11: 24).⁷² The Malay influence explains the adoption of the name “Vijaya,” transformed into “Bisaya,” in the Philippines and at Sabah (Mahdi 2008: 122). Glover (2002: 171) notes the discovery of ceramics from the Persian Gulf at two sites in the Philippines. The site of Balangai I (town of Butuan, Mindanao) has yielded shards of Sassano-Islamic pottery, a fragment of Egyptian “three-color” pottery dated to the ninth century, as well as fragments of Islamic glass vessels, and Chinese ceramics from the Tang period. Other shards of western Asian pottery have been discovered at Batangas, on Luzon Island. While this pottery may have come from passing Arab or Persian merchants, it is more likely that Malay traders were involved in the importation of exotic goods.

The period between the sixth and tenth centuries thus saw the emergence of insular Southeast Asia as a semi-periphery of the world-system, a process reflected by the rise of Srīwijaya and the gradual rise of Java. These developments unfolded over the long term; they would be more evident during the next phase of the system, when Sumatra and more importantly Java would be able to develop and export their own products.

Alongside Buddhism and Hinduism, Islam played a key role very early on in expanding trade networks via Southeast Asia. Muslim families settled there at the dawn of Islam. The significance of Arabs and Persians at Canton during the eighth century has already been alluded to. An envoy of the king of Champa in China in 958 bears the name Abū Ḥasan. The first inscriptions in Arabic in Southeast Asia, however, date only as far back as the eleventh century. Along with a talisman-seal excavated in Barus, an epitaph found at Leran, near Surabaya in eastern Java, dated to 1082, is the earliest Arabic inscription to be found in insular Southeast Asia (Lombard 1990, 11: 29). Two early epitaphs are also known from southern Champa: one of them, at Phan

⁷⁰ Seven Javanese inscriptions dated between 902 and 1053 refer to merchant associations known as *banigrāma*. South Indians (Manigrāmam guild) were present in the Balinese port of Julah (Wisseman Christie 1999: 242–244).

⁷¹ It is possible, however, that Sunda, where an inscription from the ninth century has been found, was under the direct control of Srīwijaya at this time (Manguin 2000d: 173).

⁷² Damais has already pointed out the coexistence of Old Malay and Old Javanese during the eighth and ninth centuries in Java. Some inscriptions in Old Malay are Shaivite. One mentions the name of a ship’s captain. See also Andaya 2001: 321.

Rang, is dated to 1039 CE. The Chinese chronicler Zhao Rugua, in his *Zhufanzhi* (1225), indicates that Poni (Brunei) sent an ambassador called Bu Ali (Abū ‘Ali) to the Chinese court in 977, with a text written on bark (Hirth and Rockhill 1911: 157; see also the *Songshi*).

The Muslim influence was even more strongly felt on the other side of the Indian Ocean, in the building of the East African semi-periphery. The East African coast experienced significant development after the eighth century, and Islam was introduced at this time.

The settlements [of the Zanj] extend over an area of about 700 parasangs in length and in width.
(Mas'ūdī 1965, 11: 323)

The sailors of Oman cross this gulf, then go on the sea of the Zanj to reach the island of Qanbalu. It has a mixed population of Muslims and Zanj idolaters . . .
The sailors from Oman who sail there are Arabs from the tribe of Azd.
(Mas'ūdī 1962, 1: 93–94)

The sea of the Zanj ends with the land of Sofala and the Waqwaq, which produces gold and many other wonderful things.
(Mas'ūdī 1965, 11: 322–323)

The “Zanjian” Phase (Sixth–Tenth Century)

From a linguistic point of view, the “Zanjian” phase¹ appears to be marked not only by a differentiation of the “Proto-Sabaki” language (spoken by Bantus settling between the Tana River and southeastern Somalia) into various groups, but also by the expansion of these groups, which D. Nurse links to trade blooming “in contact with foreign traders.” The Swahili and Comorian languages had split by the ninth century (Nurse 1983: 140; Nurse and Hinnebusch 1993: 494–495). During the period between the sixth and tenth centuries, a type of pottery which M. Horton has called Tana Tradition Ware (also referred to as Triangular Incised Ware [TIW] by F. Chami)² – also found decorated with crisscross patterns or zigzag bands – replaced Early Iron Age Ware (EIW). Research to date shows that Tana Ware has been discovered from the Kenyan coast to Mozambique and in the Comoros, but not in Madagascar, except at a site on the Androy coast.³ This type of pottery is characteristic of all the Swahili settlements of this period. It has recently been discovered at a site located 1,000 kilometers away from the Tanzanian coast, on the eastern coast of Lake Nyasa (Mapunda 2001). According to M. Horton, the Tana Tradition Ware originated in the region where the differentiation of Proto-Swahili took place.⁴ It is in this

¹ Chami has suggested that this period be called the “Zanjian phase.”

² Horton’s “Tana Tradition” (phase A). See Horton’s (1996: 408) and Kusimba’s (1999: 92) maps.

³ This is unlike the indications on the map shown in Horton and Middleton 2000: 40–41, and unlike what T. Spear writes: he is referring to TIW at Irodo (2000: 267).

⁴ Abungu (1990) and Horton (1993) have stated that this Tana Tradition Ware, once thought to be dated to the eighth century, may have had its origins in the “Pastoral Neolithic” of the Rift valley and the Kenyan highlands, and could be partly linked to Cushitic populations. Chami has contradicted this opinion.

same region that some traditions place the origin of the Swahili people, at Shungwaya.⁵ F. Chami, however, claims an earlier development of TIW in Tanzania before it appeared on the Kenyan coast, with an EIW/TIW transition phase dated to between the fourth and sixth centuries on the Tanzanian coast as well as in Central Tanzania.⁶ In Kenya, R. Helm (2000) shows a transition around 600 CE in the Mombasa region, and at the site of Mgombani (Spear 2000: 269; Insoll 2003: 159). Early dates for inland Tanzania, however, must be revised: the first TIW has been dated to the eighth century at Mpiji, and the datings at Misasa are dubious. Therefore, “it is difficult to sustain the notion of an early phase of TIW” (Fleisher and Wynne-Jones 2011: 256). The region of origin and date for the first TIW thus remain questionable. Moreover, it is difficult to envision a simple link between the spread of this type of pottery and the expansion of the Swahili language: yet this correlation is often presented as an obvious one. It is unlikely that the TIW users spoke the same language all along the coast.⁷ While regional differences can be observed, the relative unity of TIW does “imply networks of interaction” and probably “reflects particular consumption practices” (Fleisher and Wynne-Jones 2011).

Following the Greek–Roman period, the East African coast experienced some development by the fifth–sixth century, in connection with Sassanid trade (Persia conquered Yemen and Egypt in 570 and 616), but it was mainly from the eighth century onward that commercial and cultural exchanges helped mercantile centers prosper along the East African coast.⁸

On the origin of the Swahili culture, historians have been divided into proponents of an Arab or Persian “colonization” and advocates of indigenous developments. The word “Swahili” derives from the Arabic *sawāhil* [plural], “coasts”; the singular, *sabel*, meant “warehouse, outpost.”⁹ In fact, it was the integration of East Africa into the world-system that led to the emergence of mercantile centers and elites. Monopolizing contacts with the outside world, these elites helped form a society functioning as an interface between dominant regions (Arabia, Persia, Egypt, and India) and terrestrial (the African

⁵ Middleton 1992: 15; Spear 2000: 290. Somalis (Eastern Cushites) did in fact play a role in the region called Shungwaya, where they arrived from the Jubba River valley prior to the tenth century (Pouwels 1987: 12 and n. 14).

⁶ According to Chami (1994: 91), TIW appeared as early as the sixth or seventh century at various Tanzanian sites (Mpiji and Kaole, north of Dar-es-Salaam, Kiwangwa and Masuguru in the hinterland of Bagamoyo, Misasa and Kivinja south of Dar-es-Salaam): these datings would be earlier than those given for the coastal sites of Kenya. Juma (2004: 158) “has identified transitional features from earlier Kwale Ware at Unguja Ukuu” (Fleisher and Wynne-Jones 2011). See also Spear 2000: 266–268. At Dakawa (Kenya), “the [eighth century] dating is at odds with arguments in favor of a transition from Kwale to TIW” (Fleisher and Wynne-Jones, 2011: 264).

⁷ As Fleisher notes (2004a: 55), it was not only Swahili speakers who were involved in developing the Tana tradition along the Tanzanian and Mozambican coasts between the sixth and ninth centuries since, according to Spear (2000) as well as Nurse and Hinnebusch (1993), the Swahili language was forming along the northern Kenyan coast at that time. Fleisher correctly points out the danger of systematically associating the development of ceramics, language, and social organization.

⁸ Surprisingly, Chaudhuri (1990: 36) writes: “In spite of their close connection with the Islamic world, the indigenous [East] African communities appear to have been structured by a historical logic that is separate and independent from the rest of the Indian Ocean”; “[this] justifies for Chaudhuri the exclusion of East Africa from his work on the civilizations of the Indian Ocean” (Benjamin 2006: 25 n. 7). Abu-Lughod (1989) has also excluded East Africa from her model.

⁹ J. de V. Allen (1993: 59) signals that one meaning of *sabel* is “a port used for inland trade.”

hinterland) and maritime margins (the Comoros and Madagascar). The culture which formed along the East African coast is a good example of what I. Wallerstein has termed a “semi-periphery” (see also Chase-Dunn 1988; Chase-Dunn and Hall 1997): an area which, within the world-system, finds itself in an intermediary position between a core and its peripheries. “Agents” from the cores (or from other semi-peripheries) were present in the centers along the East African coast – these included merchants, members of lineages vanquished in political conflicts, and religious groups fleeing persecution (Wright 1992). The Swahili – and Comorian – ruling groups often claim to be the descendants of ancestors belonging to prestigious lines from Arabia or Persia. In order to facilitate trade and foster a climate of trust, local communities undertook to ensure protection for traders. The merchants may themselves have been accompanied by armed men. According to al-Sīrāfi, “when merchants go to Berbera, they take escorts with them” (Horton and Middleton 2000: 91). Africans and foreign merchants implemented various strategies of alliance involving intermarriages and blood brotherhood: these established fictive kinship between individuals (see below).

More importantly, as was the case in Southeast Asia, the elites of the East African coast converted to the religion of the foreigners, here Islam. Brought in by Arabo-Persian merchants, Islam slowly pervaded the Cushitic and/or Bantu worlds, and helped build the Swahili culture. This conversion of the elites eased their insertion into existing merchant networks and gave them access to the universe of the dominant cores,¹⁰ ensuring that they would belong to a community powerful both economically and symbolically: these two aspects were viewed as indissolubly connected. Conversion also conferred protection from slave raids initiated by Muslim foreigners. Islamization was the expression of a new perception of the world, of society, and of the individual. Linked to Islam, the introduction of writing marked an important step, boosting trade and credit, and – generally speaking – favoring the flourishing of East African societies. Arabic script appeared inseparable from a divine force and the magical practices that can be found in the whole Muslim world.¹¹ The spread of Islam was not and never would be the result of proselytism along the East African coast. According to Horton and Middleton, the Swahili – in order to highlight their difference from the “barbarians” of the hinterland – later “actively kept Islam as a coastal monopoly”¹² (Sena and

¹⁰ The same phenomenon can be seen in Southeast Asia, where the elites sought to legitimize their political power by adopting the religions, script, and political institutions of the dominant Indian cores, particularly from the fourth century onward. The conversion of Africans (merchants or slaves) in the Persian Gulf or in Arabia may also have had a hand in the process of islamization. Al-Sīrāfi relates that a Zanj king, who had been captured and taken to Arabia as a slave, converted to Islam and managed to return to his country; this “edifying story” is likely to contain some part of historical truth.

¹¹ Hamès 2007. We have no ancient historical data on the use of writing and its extension in East African societies. The Antemoro of southeastern Madagascar made political and magico-religious use of Arabic script, in the Antemoro kingdom founded in the sixteenth century. An economic use of this script is possible along the East African coast, such as use of the order of payment *sufṭaja*, and delegation of credit *ḥawāla*. Nor do we know whether or not the Swahili borrowed the various kinds of partnership in use in the Muslim world, implying the writing of contracts.

¹² Horton and Middleton 2000: 89–90. Privileged access by rulers to the external world, the source of power – a phenomenon observed universally – was applicable to both goods and knowledge. Cf. Liu (2003) for Neolithic China and the first Chinese states. Cf. also Ekholm 1972, Kohl 1975, Friedman and Rowlands 1977, Peregrine 1991, Helms 1988, and Sherratt and Sherratt 1991.

Shona speakers, however, converted to Islam during the fifteenth–sixteenth century, in the Zambezi valley and in Zimbabwe, a sign of expanding trade with the coast in this region; see below). It is a general feature, in fact, that elites tend to control both technological innovation and its transfer (Peregrine 1991; Costin 1998); it is more unusual for them to try to prevent the spread of their religion: dominant regions often take advantage from such diffusion (but see Helms 1988: 151 on the Mayas of Yucatan during the sixteenth century).

In general, foreigners became integrated into coastal societies and exerted an influence via and within existing social structures,¹³ which they helped shape. These processes built a true ideological, economic, and political configuration that was specific to the East African semi-periphery, one that intensified the phenomena of dependence and transfers of wealth to the cores, while at the same time allowing this African coast to develop. This evolution went side by side with the physical and cultural hybridization.

It seems that Islam was first brought to the islands along the coast – in particular in the Lamu archipelago, on Pemba and Zanzibar, where Arabs and Persians sojourned or settled – before spreading along the African littoral. Horton has excavated what remained of a mosque dating to the eighth century at Shanga; this mosque was erected at the center of the settlement, near a well.¹⁴ The position of the skeletons in the tombs at Shanga (around 800 CE) shows respect for Islamic rules (Horton 1993: 442; Rougeulle 1996: 165). A seal ring unearthed at Shanga bears an inscription in Arabic on the reverse of a black jasper disc (Horton 1996: 357). The remains of a stone mosque dated to the early tenth century have been excavated at Ras Mkumbuu (Pemba); this mosque had been preceded by a wooden building dated to the eighth or ninth century, as in Shanga. Another stone mosque, dated to the tenth century, has been discovered at Unguja Ukuu (Zanzibar).¹⁵ At this site, Muslim gold coins going back to the eighth century were collected in 1866. On Pemba, at the site of Mtambwe Mkuu, a cemetery containing twenty graves dated to between 950 and 1100 has recently been excavated. The tombs show two different perpendicular orientations, perhaps reflecting a mix of Sunni and Shiite influences (Horton 2001: 454) (Insoll [2003: 189], however, appears to view this interpretation with caution). The oldest layers at Kilwa have yielded a whetstone bearing a graffito in Arabic (Hourani *et al.* 1995: 147; Insoll 2003: 167). In the south, on the Mozambican coast, a tomb at Chibuene that is oriented according to the Muslim rule has been attributed to the tenth century. This site, situated in Vilanculos Bay, contains white-glazed pottery from the Persian Gulf, as

¹³ “And not as strangers *per se*” (Pouwels 2002: 416). In some places, more massive migrations may have occurred, leading to more brutal transformations. Pouwels underscores the probable role of the *moieties mikao*, as places of integration, through the staging of various ceremonies or ritualized practices (Pouwels 2002: 412).

¹⁴ Under a stone mosque built around 1000, Horton has discovered the remains of seven successive wooden mosques, and discerned twelve building phases (Horton 2001: 452–453). Another structure dating to the early ninth century has been excavated at Bui, on Pate Island; it was probably a mosque.

¹⁵ Horton and Middleton 2000: 50–51; Horton 2001: 454. The authors relate the stone mosque of the tenth century at Ras Mkumbuu to the Ibadis, based on the fact that the mihrab was simply inserted into the thickness of the northern wall (2000: 66, 221) (this has also been observed at Tumbatu and Sanje ya Kati).

well as Tana Ware (TIW) (between 750 and 1000), a type of pottery which was common along the Swahili coast (Sinclair 1987: 87–89).¹⁶ It seems that the TIW “was made elsewhere and brought to Mozambique” (Fleisher and Wynne-Jones 2011). Fragments of eggshell ware dated to the eighth century have also been recovered, and “shards of very thick red ware . . . have been identified as Sirafi water jars” (Sinclair *et al.* 2012: 728). A few pieces of sgraffiato may date to the end of the first millennium. Moreover, shards of Sassano-Islamic pottery have been found at Punta Dundo (c. ninth century) (Bazaruto Island, off the coast of Chibuene) and further south, on the coast of Natal (Maggs 1976; Sinclair 1991: 190–191). The Chibuene area may be the “Sofala” of early Muslim geographers (Hourani *et al.* 1995; Insoll 2003: 167).

Expanding trade and craft production led to the development of villages and towns, along the coast and later in the interior (most of the settlements, such as those at Manda and Pate, were still small at the start of the ninth century). At Shanga, tiny silver coins have been recovered; these would later be imitated in coins from Pemba, Zanzibar, Mafia, and Kilwa (Horton 1996: 368ff.; 2001: 453).

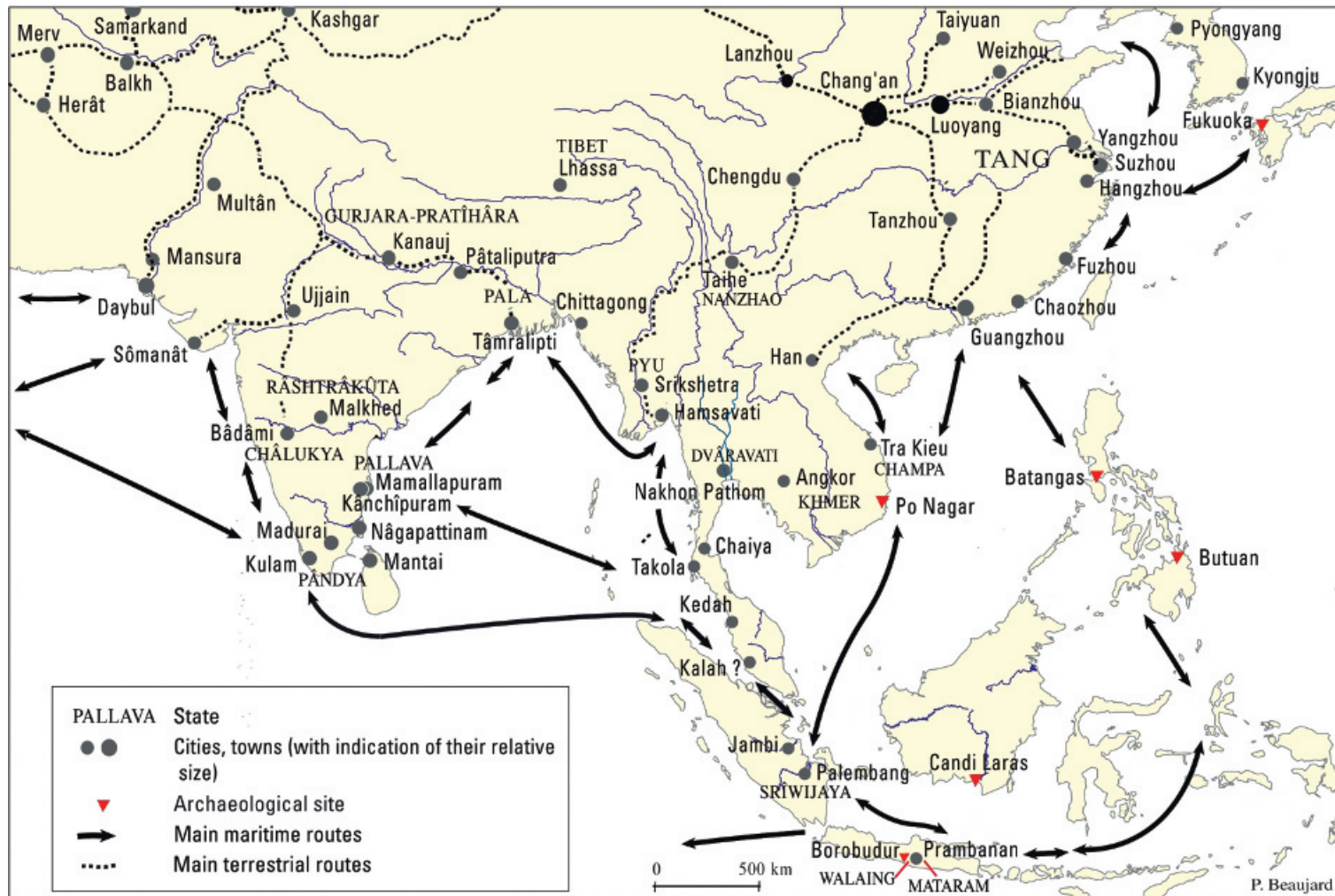
Urban progress was also linked to that of agriculture. Along the northern coast, the towns of Barawa, Marka, and Mogadishu exploited silt from the Webi Shebele River valley (Sinclair and Hakansson 2000: 465).¹⁷ At the mouth of the Tana River, Ungwana built upon the agricultural potential of this valley, which was also a route leading inland toward the Great Lakes. The tenth-century Arab geographer Mas’ūdī signals the significance of the banana tree and sorghum (*dura*), “their staple food.” He mentions a tuber called *kalādi*, which may refer to a yam or, more probably, to taro (see above). A plant called *ar-rāsan* has been identified as being a *Coleus* (Lamiaceae family). Arab texts also mention rice, coconut (Mas’ūdī notes the abundance of coconut trees on the islands along the coast), sugarcane, tamarind, and grapevine. “Archaeobotanical analyses support the presence of the coconut tree on Pemba, the Comoros and mainland Tanzania by the sixth to eighth centuries” (Boivin *et al.* 2013). Chinese chronicles also give some information on livestock breeding and agriculture along the East African coast. According to Duan Chengshi (ninth century), quoted previously, the inhabitants of the Berbera coast, where agriculture was scarce, lived on the meat, milk, and blood that they drew from their livestock: the inhabitants “often prick a needle into the veins of the cattle they raise and extract the blood, which they mix with milk and consume raw” (Wheatley 1975: 101).

Mas’ūdī points out the expansion of the Swahili culture during the early tenth century. Indeed, sea-oriented sites, often built on islets or peninsulas (a phenomenon seen in Madagascar as well) or at the mouths of large rivers, were scattered along nearly 3,000 km of coast. Rivers were access routes toward the interior, and offered an agricultural potential from which the coastal towns profited, while exploiting fishery resources. Here we observe a good example of fringe cultures – in the geographical as well as cultural sense of the term – as put forward by P. Ottino. Geography partially explains the towns’ development as independent political units. As in the Malay world and along the land routes of Inner Asia (in the Tarim basin), a city-state culture was

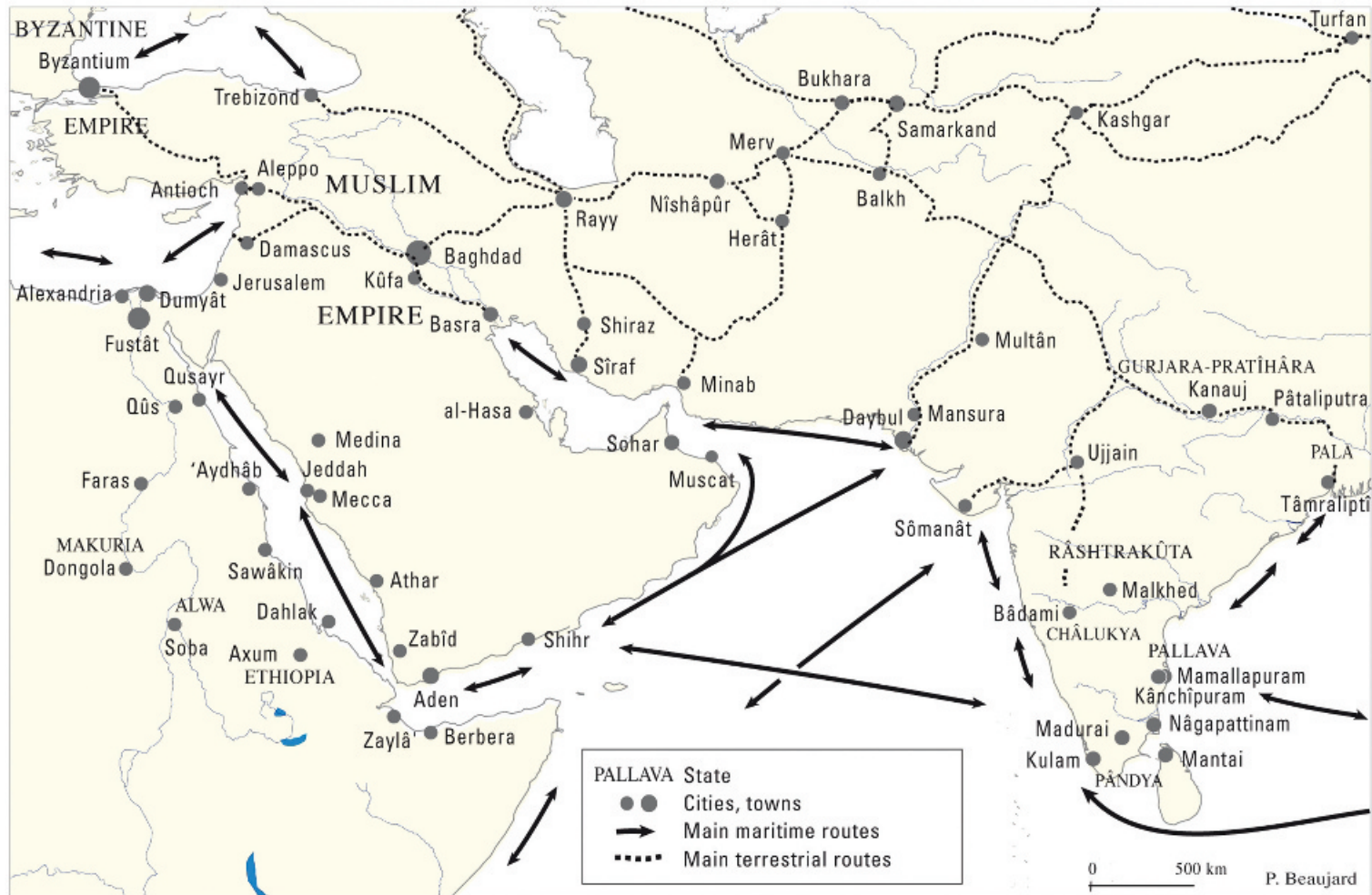
¹⁶ Chibuene has also yielded pottery belonging to the Gokomere-Ziwa tradition, as well as red-slipped pottery with graphite decoration.

¹⁷ Barawa marked the northern limit of the vegetational mosaic of the Zanzibar-Inhambane type and the distribution area for Swahili dialects (Sinclair and Hakansson 2000).

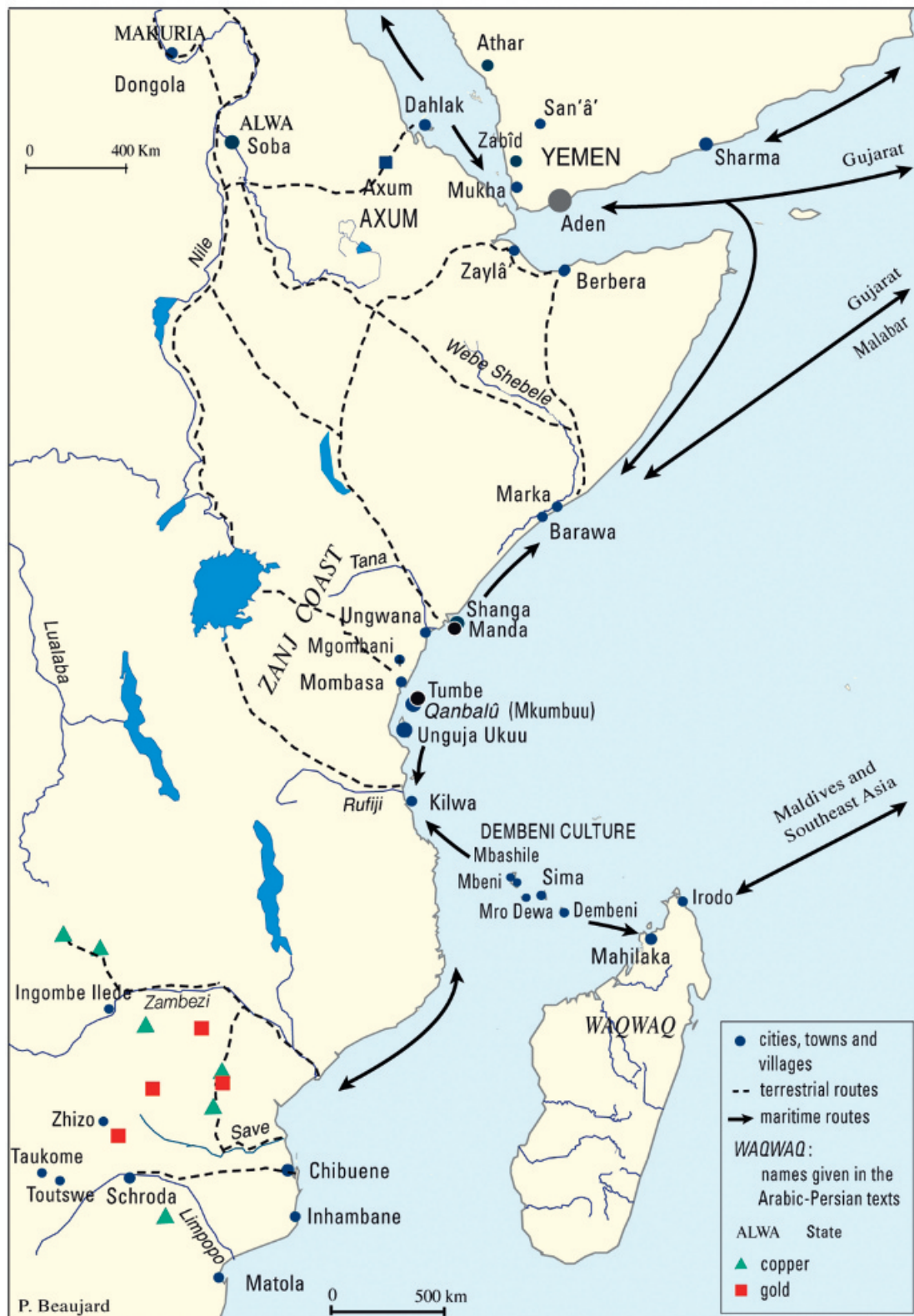
Map 1.3 The eastern Indian Ocean and the China Sea between the seventh and tenth centuries



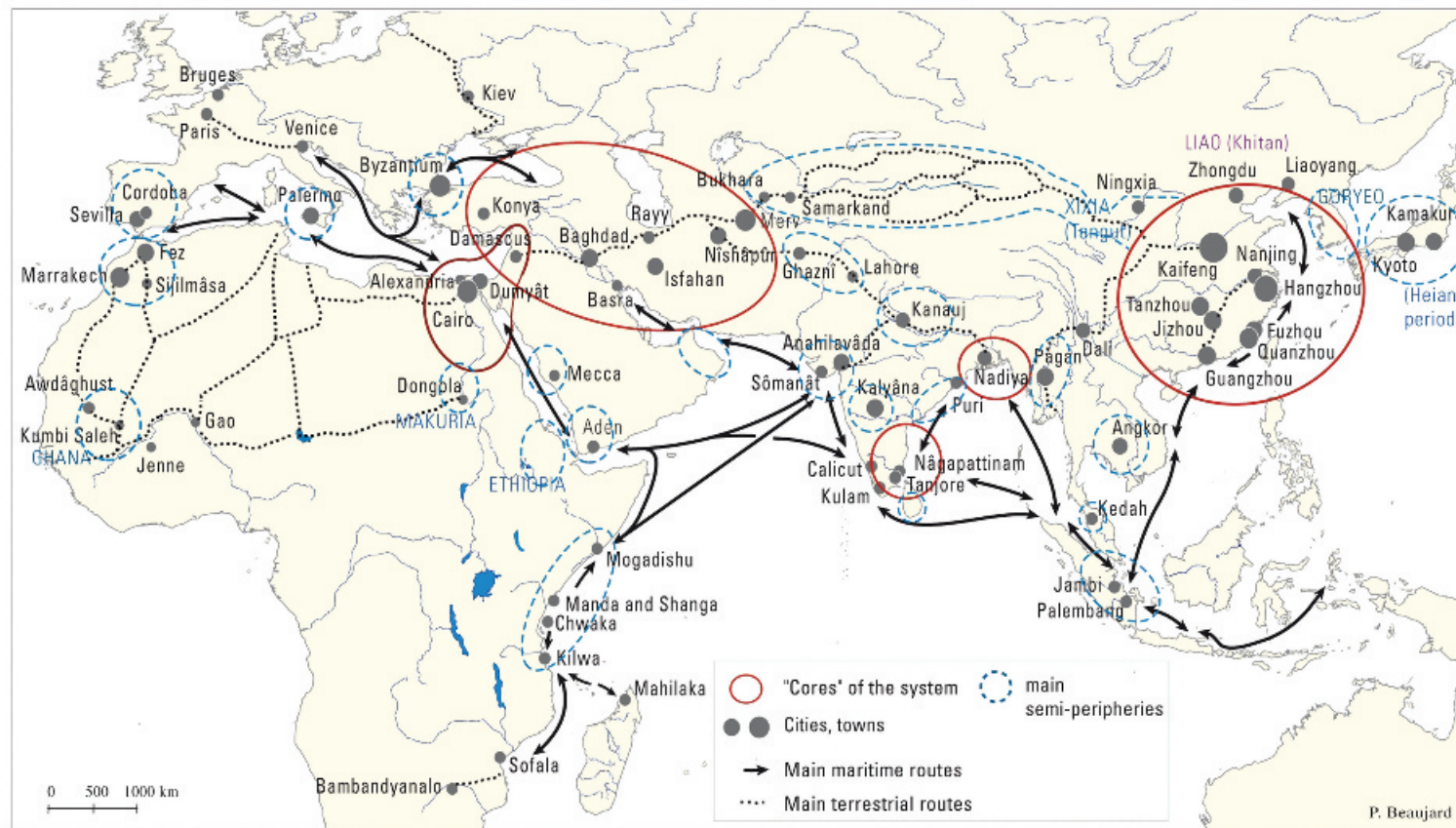
Map 1.4 Western Asia and northeastern Africa from the seventh to the tenth century



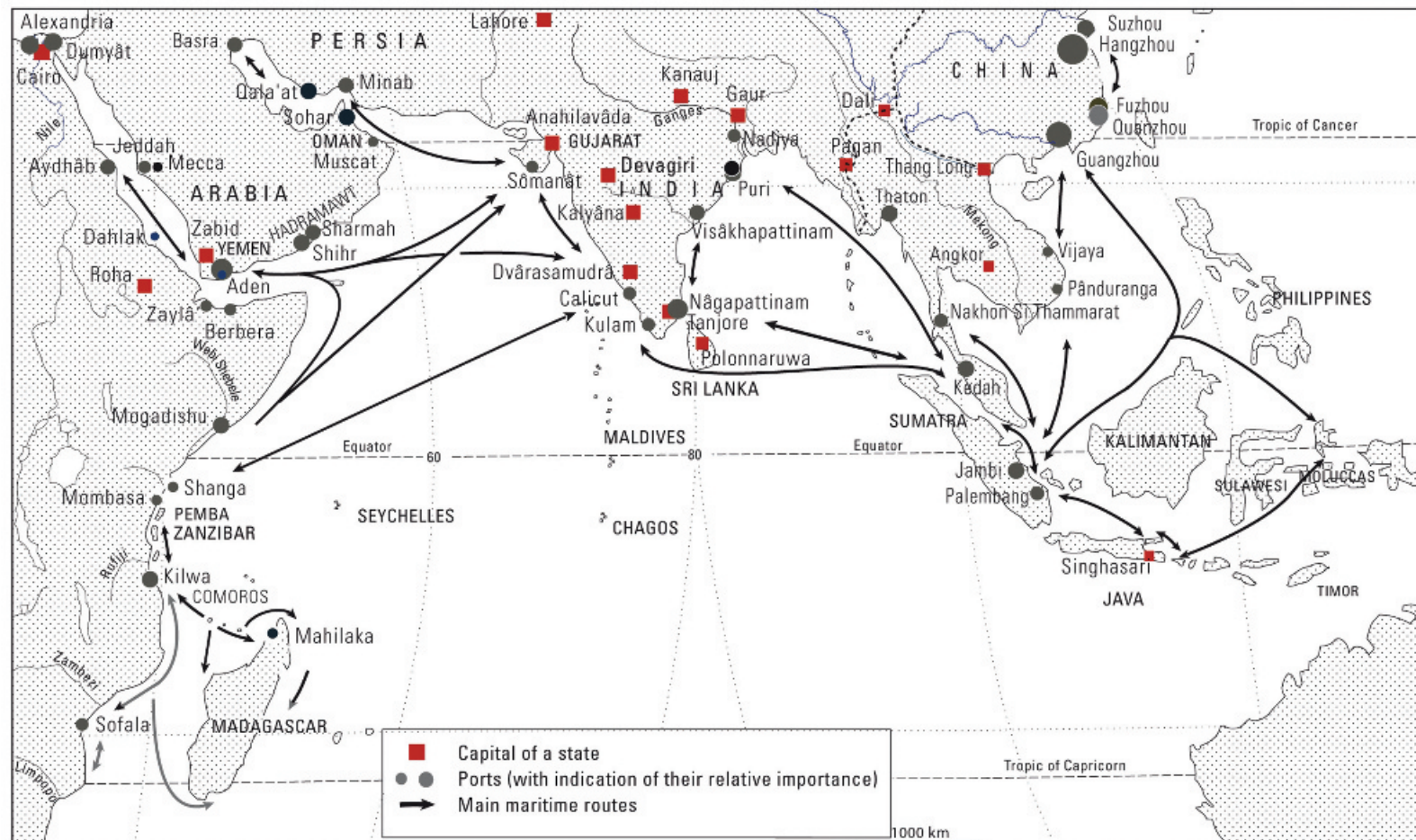
Map 1.5 East Africa and Madagascar (seventh–tenth century)



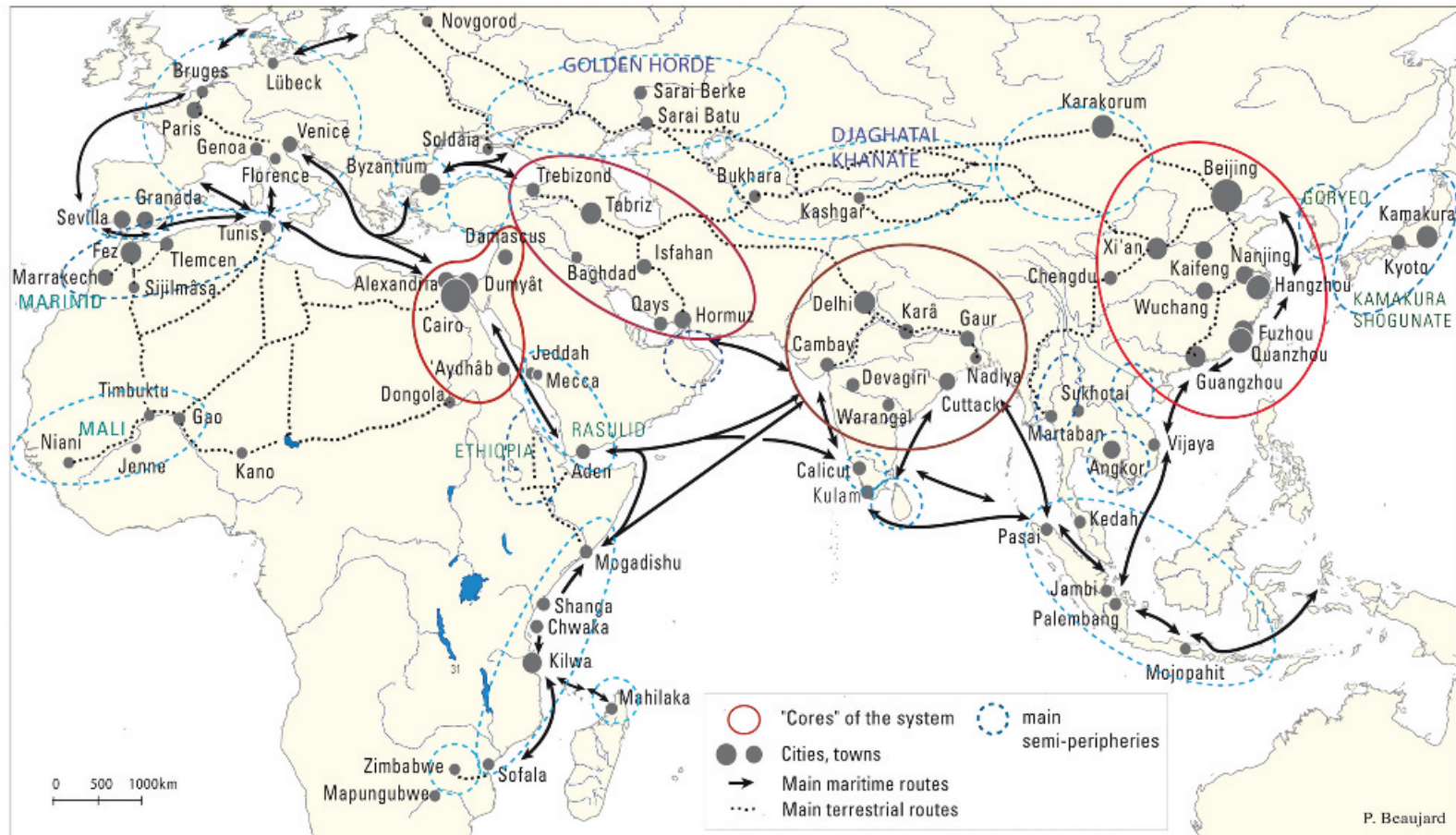
Map 11.1 The Afro-Eurasian world-system between the eleventh and early thirteenth centuries



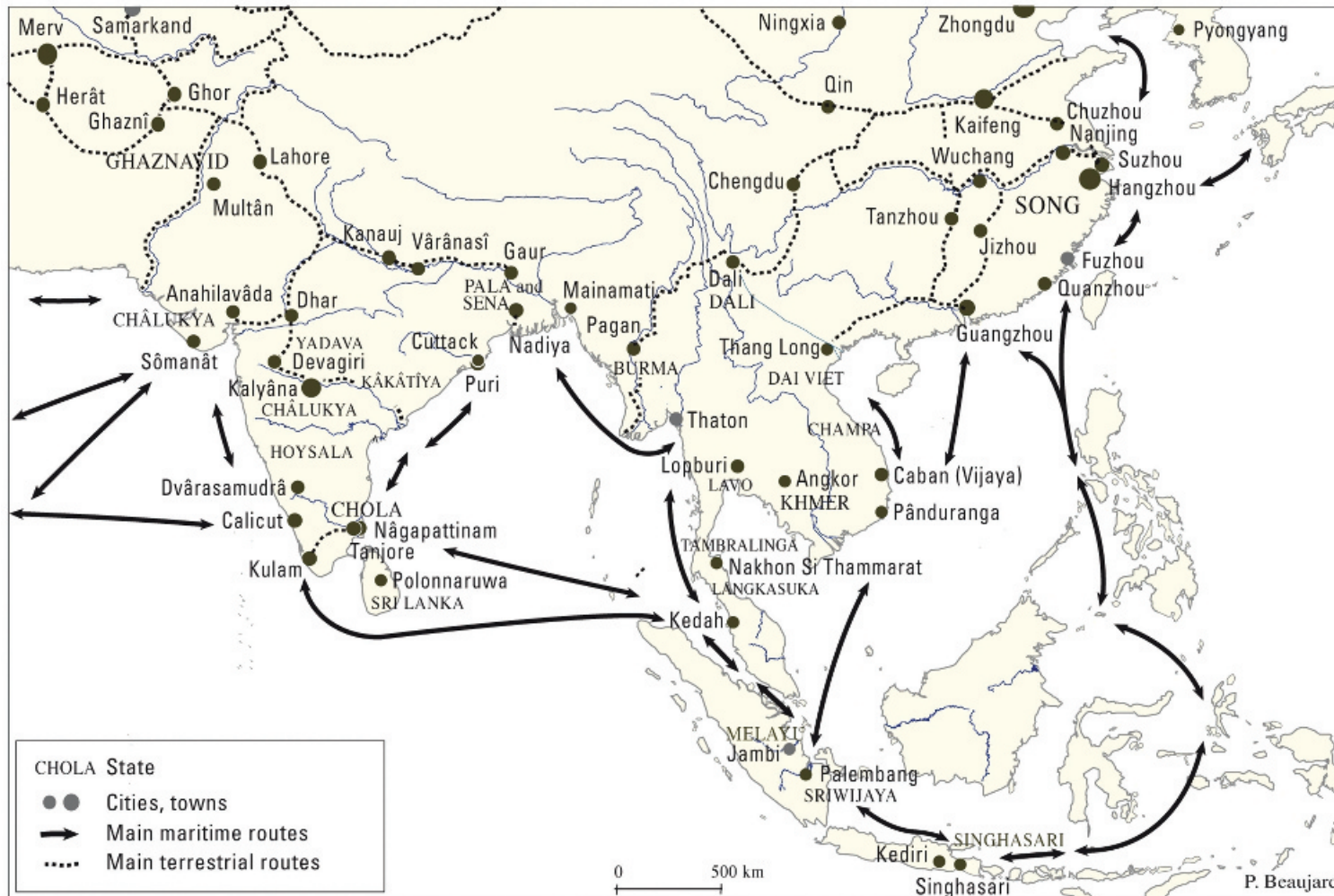
Map 11.2 Trade in the Indian Ocean during the eleventh and twelfth centuries: relative significance of the main ports



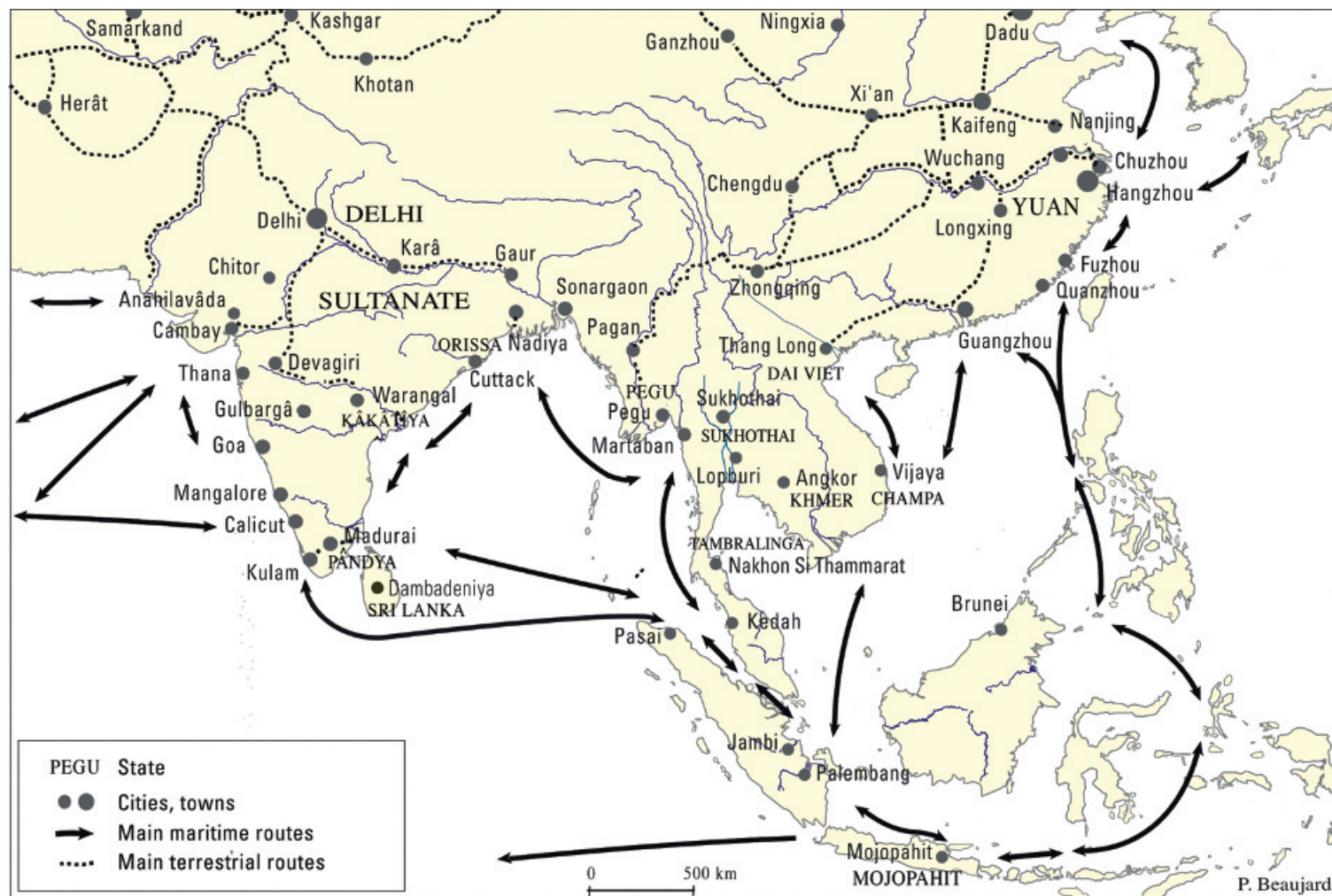
Map 11.3 The Afro-Eurasian world-system during the thirteenth and fourteenth centuries



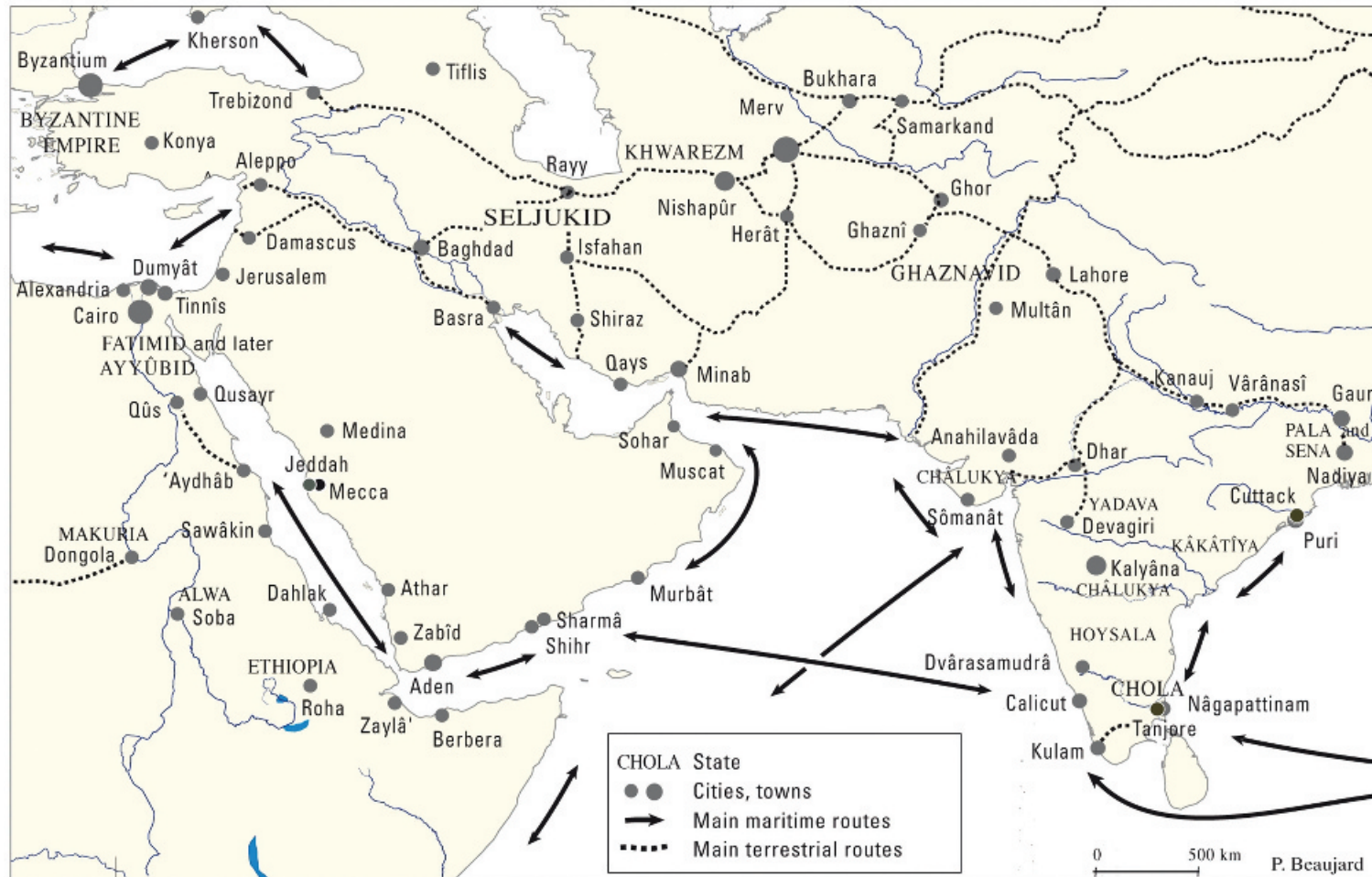
Map 11.4 Eastern Asia during the eleventh and twelfth centuries



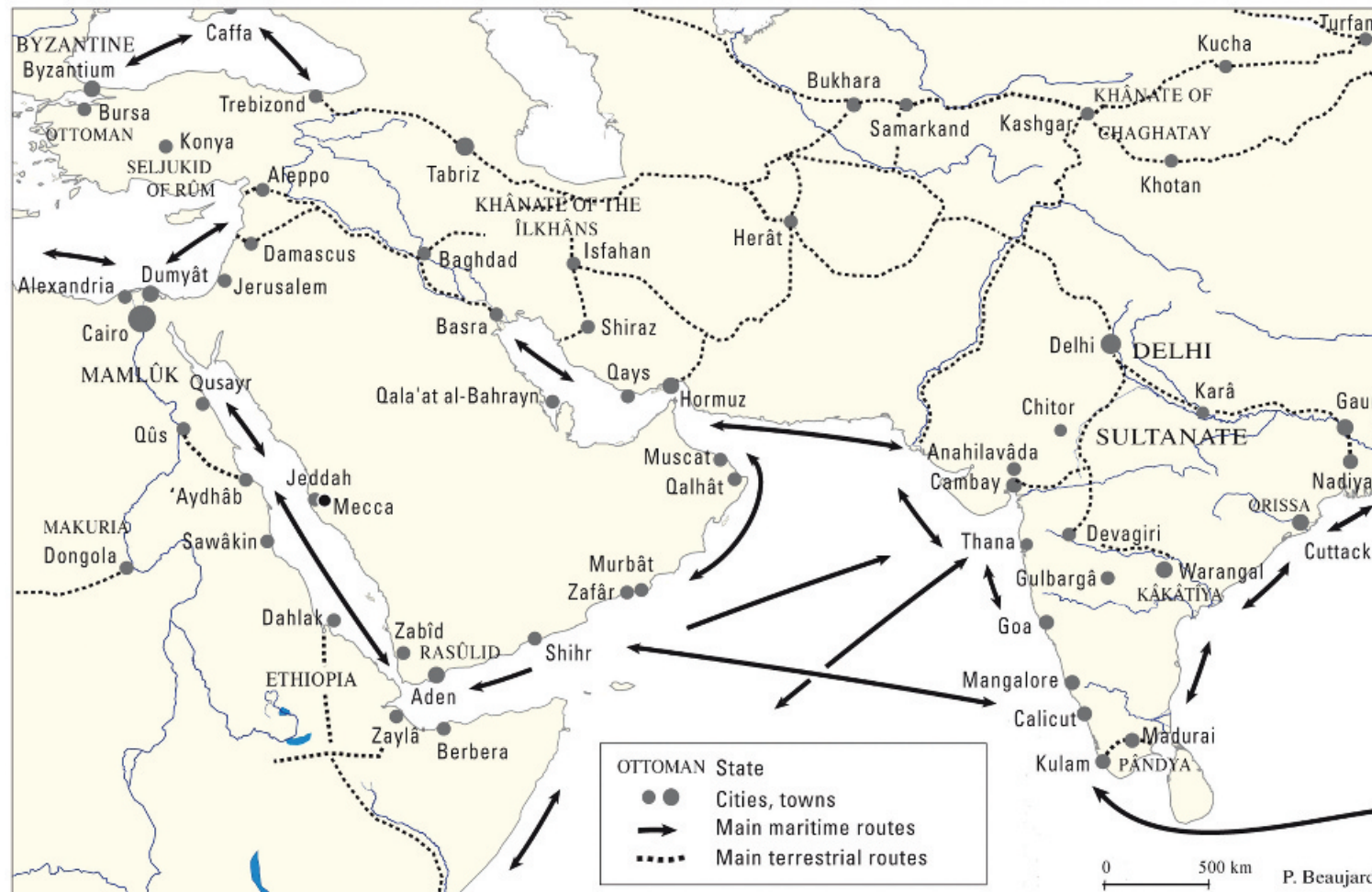
Map 11.5 Eastern Asia during the thirteenth and fourteenth centuries



Map 11.6 Western Asia and northeastern Africa during the eleventh and twelfth centuries



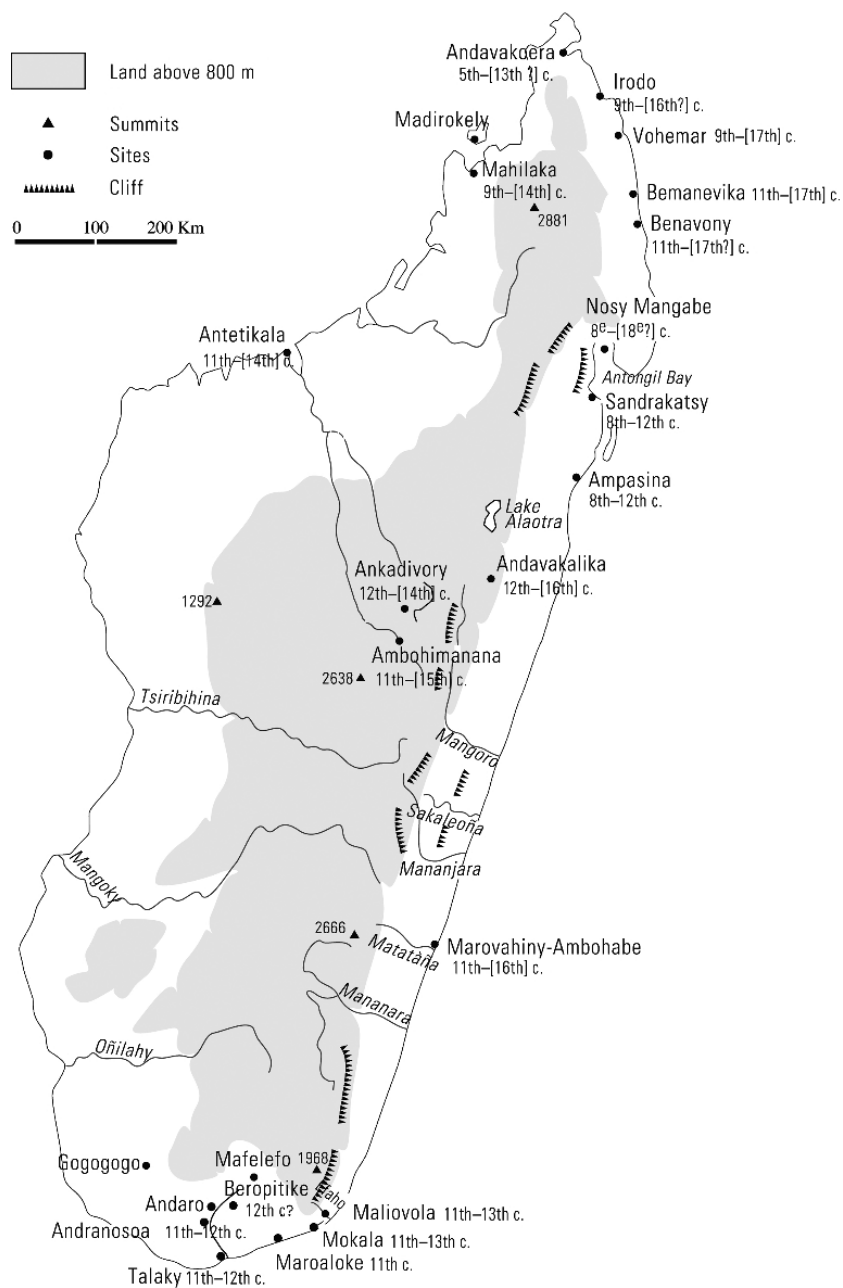
Map 11.7 Western Asia and northeastern Africa during the thirteenth and fourteenth centuries



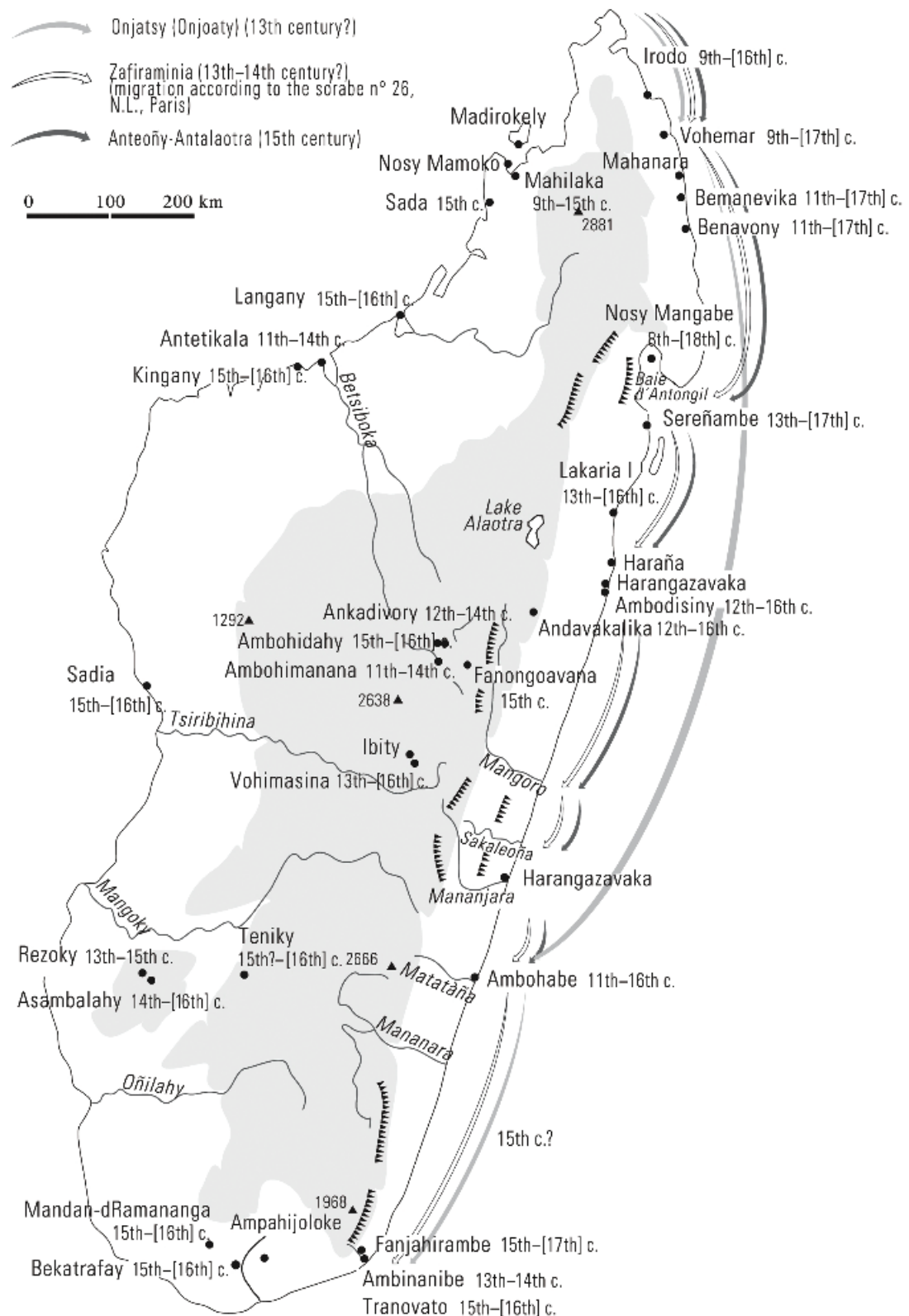
Map II.8 East Africa and Madagascar (eleventh to fourteenth century)



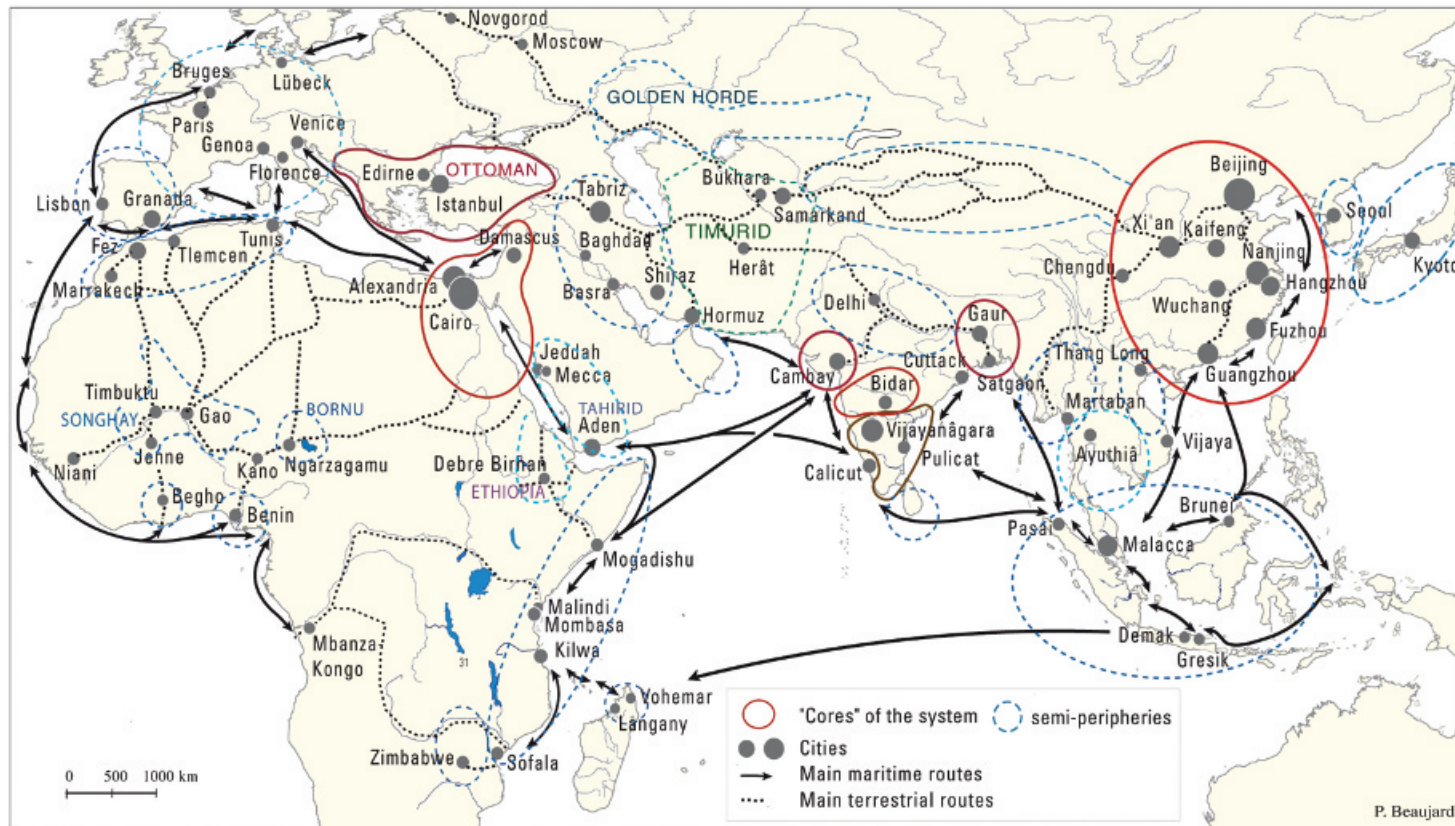
Map 11.9 Madagascar: main early sites (ninth to twelfth century)



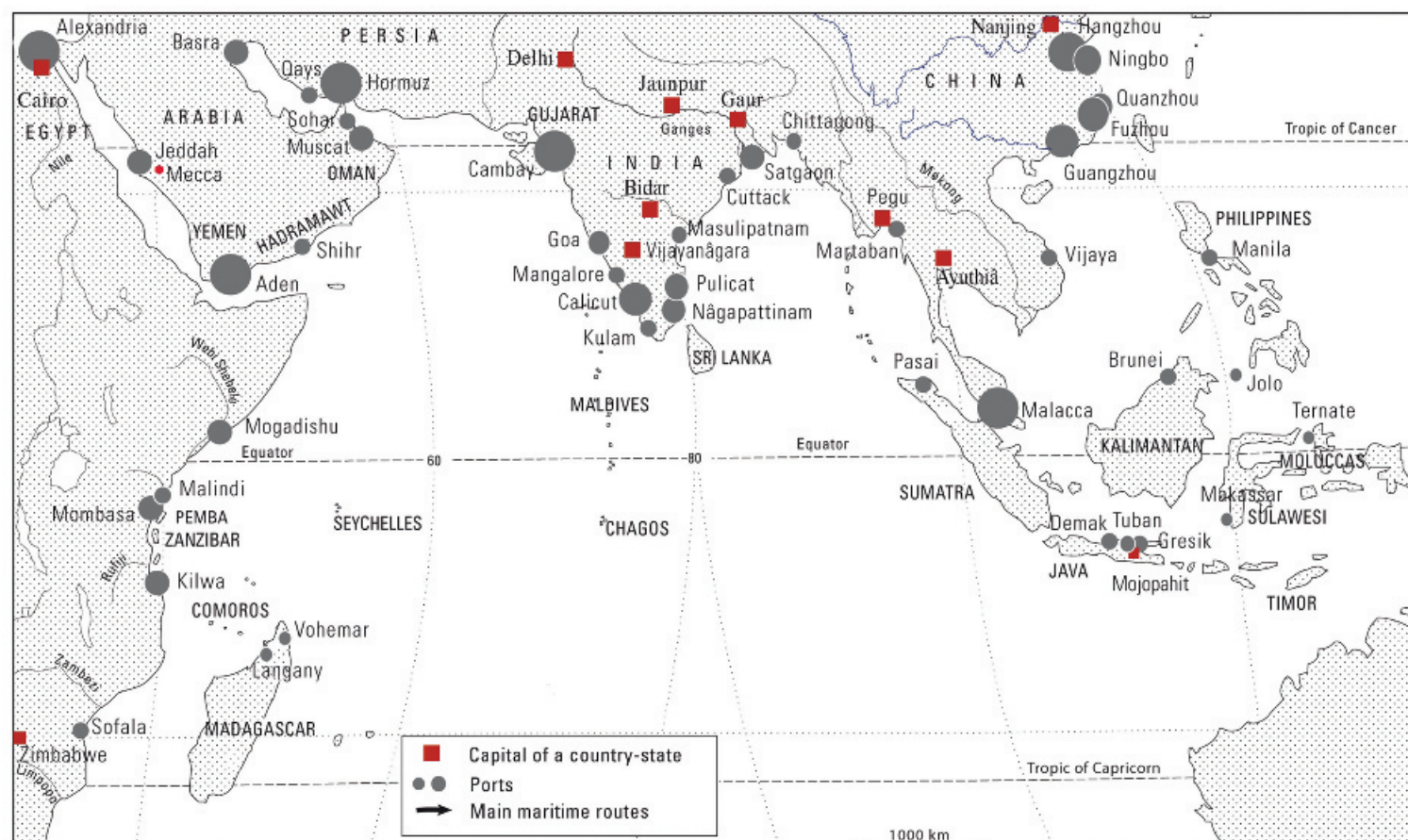
Map 11.10 Madagascar: main sites (thirteenth to fifteenth century); routes followed by the Onjatsy, Zafiraminia, and Anteoñy-Antalaotra



Map III.1 The Afro-Eurasian world-system in the fifteenth century



Map III.2 Trade in the Indian Ocean in the fifteenth century: relative importance of the main ports



created (see Hansen 2000a: 16–17). By the ninth and tenth centuries, the coastal towns of Marka, Barawa, Mombasa, Shanga, Pate, Manda, Unguja Ukuu (on Zanzibar), and Qanbalū (not precisely located, but usually thought to be a site on Pemba; see below) had appeared. Until the eleventh century, the only significant towns appear to have been Manda (7 hectares in the late tenth century), Qanbalū, and Unguja Ukuu (10 hectares during the ninth and tenth centuries), whose name may signify “central place.”¹⁸ At this time, Kilwa, however, already covered about 10 hectares. Kilwa has yielded fragments of glass vessels that are comparable to glass from Nishāpūr (Iran), also known in Sri Lanka (Coningham *et al.*, 2006: 335). The maritime vocation of the Swahili became more apparent: al-Sīrāfi writes of the many boats surrounding Arab vessels on the Sofala coast (Sauvaget 1954: 221). The same author reports that “some of the ship captains sailing in the Indian Ocean were Zanj.”¹⁹ Three key regions developed along the littoral which the Arab geographers called the “Zanj coast”: the Lamu archipelago, Pemba and the straits of Zanzibar, and the region including Chibuenne and southern Mozambique. These regions were linked to trade routes leading into the African interior.²⁰ The characteristics of the monsoon, as R. Pouwels notes, “put northern coastal settlements at an advantage as ports of call, for Arab, Persian Gulf, and Indian dhow traffic” (2002: 387). Moreover, Pemba stands out for its agricultural potential, which the Portuguese would later emphasize (Vernet 2013).

Trade was conducted primarily in connection with eastern Arabia (Oman)²¹ and the Persian Gulf. The main commodities involved in this trade were ivory,²² iron, wood, gold, slaves, ambergris (used as a fixative for perfumes),²³ turtle shells, rock crystal, and shell beads.²⁴ Mas‘ūdī describes the travels of Omanis as far as Qanbalū, “inhabited by a mixed population of Muslims and Zanj idolaters.”²⁵ Our geographer writes: “The merchants of Sīrāf are also in the habit of sailing on this sea. I have made a voyage on it from Sohar, which is the capital of ‘Oman, with a crew of Sirafis.” The name “Qanbalū” may refer to the site of Ras Mkumbuu, on the west coast of Pemba: the Arab geographer Yāqūt (early thirteenth century) – who had compiled earlier works – mentions “Mkumbulu” on the “Green Island” (Pemba), whose sultan claimed to be an Arab from al-Kufa.²⁶ The recent discovery of a mosque dated to the eighth–ninth

¹⁸ One does note a gap in the history of the Unguja Ukuu settlement, by the tenth–eleventh century.

¹⁹ It is strange that Idrīsī writes that “the Zanj have no ships in which they can voyage” (see below).

²⁰ Horton 1993: 454; 1996: 412. The *Hudūd al-‘ālam* written in Afghanistan (in Persian) in 982 mention M. ljan (perhaps Unguja), Sofala, and Hwfl (not determined) (Freeman-Grenville 1998: 727–728).

²¹ Al-Jāhīz (ninth century) already mentions an expedition led by an Omani prince around the end of the seventh century. This expedition reached the Zanj country and was decimated by the natives (Lewicki 1974: 19). Balādurī writes of two brothers, Sulayman and Said, who fled to East Africa and settled at Lamu when the army of Abd al-Malak conquered Oman at the end of the seventh century.

²² Two bracelets and a fragment of elephant tusk have been recovered from excavations at Unguja Ukuu (early Ia period) (Juma 2004: 144). East African ivory has been found at Siraf.

²³ Ambergris comes from the intestinal secretions of the sperm whale. It was already mentioned in the *Annals of the Han dynasty* as a product from Da Qīn (Persian Gulf).

²⁴ The production of shell beads appears to have been a significant activity at Unguja Ukuu (Juma 2004: 151).

²⁵ Mas‘ūdī 1962, I: 93–94 [para. 244]. During the fourteenth century, Ibn Battūta indicates that “the sultan of Oman is an Arab of the tribe of Azd” (1982, II: 115).

²⁶ Shepherd (1982: 133), however, sees Qanbalū as located on Anjouan Island, at Vieux Sima. Vérin also located Qanbalū in the Comoros (on Anjouan, Mayotte or Mohéli) “instead of Pemba” (Vérin 1994a: 56,

century at Ras Mkumbuu has been noted above. An extensive site has also been unearthed in the northern part of the island at Tumbe, near Chwaka; it was founded at the beginning of the eighth century, and abandoned during the tenth century.²⁷ Excavations there have revealed the cultivation of rice and African cotton *Gossypium herbaceum* (Walshaw 2005, 2010). They also show the presence of sorghum, pearl millet, and finger millet, as well as the baobab *Adansonia digitata* L. Genetic research indicates West Africa as the center of origin for this baobab (Pocktsy *et al.* 2009); it appears to have been widely spread, primarily by humans. The Chwaka site is dated slightly later than Tumbe (eleventh–sixteenth centuries). Sassano-Islamic pottery has been discovered on both sites (LaViolette 2000); in addition, Tumbe has yielded white-glazed Islamic ceramics (dated to between 850 and 1000 on the East African coast) (Forslund 2003). Both sites contained ceramics from coastal Tana Tradition Ware (also known as TIW). Between the eighth and tenth centuries, Tumbe grew from 2 to 30 hectares (Fleisher 2004a). Tumbe was later abandoned during a period of restructuring of the East African coast (Fleisher and LaViolette 2013: 1153). As is the case for other towns (Unguja Ukuu, Manda), Tumbe shows little evidence of hierarchy or settlement complexity. According to Mas'ūdī, “tusks from the country of Zanj go generally to Oman, and from there are sent on to China and India” (1965, 11: 323 [para. 849]).²⁸ Indeed, Chinese sources refer to ivory as coming from Africa. Pemba appears to have acted as a crucial node in the trade networks between the Persian Gulf and East Africa (by contrast, during the twelfth century, Pemba lost its preeminence in favor of Zanzibar and, more importantly, Kilwa). According to al-Bīrūnī (eleventh century), Qanbalū was the residence of the king of the Zanj. Mas'ūdī believed that kingship was transmitted within the Muslim population (Mas'ūdī 1965, 11: 330 [para. 872]). In another passage, however, Mas'ūdī mentions a king of the Zanj who lives in the south on the Sofala coast. “All the other Zanj kings are subject to him.” The power of the king was based on legions of soldiers riding oxen. “The name of the king of the country is *wafīmī*, which means supreme lord, they give this title to their sovereign because he has been chosen to govern them justly.” The term *wafīmī* derives from the Swahili plural *wafalme*, “kings” (singular *mfalme*).²⁹ “Among the inhabitants of the island of Qanbalu is a community of Muslims, now speaking the language of the Zanj, who conquered this island and subjected all the Zanj on it in the same manner as the Muslims conquered the island of Crete. This event [the conquest of Qanbalu] took place at roughly the same time as the changeover from the Ummayyad to the Abbasid dynasty” (Mas'ūdī 1962, 1: 84 [para. 215]).³⁰ For Horton and Middleton (2000: 73), the Kharijites of Baṣra and their Ibadite allies from Oman may in fact have taken control of

67). See also Allen 1993: 27; Allibert (2001: 25ff.) notes that Qanbalū may refer to various places; some may even be identified in Madagascar. Qanbalū may refer to coves, the Swahili *mkumbuu* meaning “belt” (Shepherd 1982: 133ff.).

²⁷ Fleisher and Wynne-Jones 2011; Fleisher and LaViolette 2013; Fleisher *et al.* 2015. Archaeological data show high population density in Pemba (Fleisher 2004a: 396).

²⁸ The significance of the ivory trade, noted by Mas'ūdī, implies extensive networks with the interior (Sinclair and Hakansson 2000: 473).

²⁹ Allen (1993: 136, 157) has suggested another derivation, from the Cushitic *wag/waga*, referring to the sky-god, and from the eastern Cushitic *ilman*, “son” (Horton and Middleton 2000: 176).

³⁰ Mas'ūdī also writes: “Qanbalū is inhabited by Muslims, and by Zanj who have not embraced Islam.”

Qanbalū in or round 750, making it the major entrepôt for the slave trade. This trade flourished at least until 868, the date of the Zanj Rebellion in Mesopotamia.³¹ Western Asia imported a large number of Zanj slaves “notably between 833 and 868” (Trimingham 1975: 118). At the end of the tenth century, yet another Zanj revolt occurred at Suhār, this one suppressed by the Buyids (Kervran 1998: 808). Various passages from the book by al-Sīrāfi point to the existence of a slave trade on the Zanj coast.³² Himself the son of a black slave, al-Jāhīz also describes “captives who come from the coasts of Qanbalu . . . our dregs and our slaves . . .”³³ The Muslims of Qanbalū probably found it necessary to negotiate treaties with African groups who delivered captives to them.³⁴ Although distance must have increased their cost, slaves from East Africa had the advantage of being resistant to malaria, a disease affecting lower Mesopotamia.

The South Arabian coast, where Sharma (Hadramawt) was founded during the Buyid period, was also in contact with the African coastal towns (in the Lamu archipelago and Pemba) (see Vallet 2015: 475). African pottery has been found at Sharma and Shiḥr, showing an African presence (perhaps slaves) at these sites (see below).

Sassano-Islamic pottery has also been unearthed in the Bagamoyo hinterland (at Mpiji, Kaole, Masuguru, Kiwangwa) (Wynne-Jones 2016: 36).

Merchants from the Persian Gulf certainly brought in the Chinese ceramics that have been found in small quantities at a few sites, in the Lamu archipelago and in the Comoros; examples include Yue green-glazed stoneware.

The towns of Unguja Ukuu, Fukuchani, and Mkokotoni, on Zanzibar, were also active, maintaining contacts with coastal sites such as Kunduchi, Mpiji, Mkadini, and Kaole. Fukuchani has yielded jars from the Persian Gulf, dated to between the fifth and eighth centuries (Horton and Middleton 2000: 44). Several sites on Zanzibar were abandoned between the tenth and fourteenth centuries, while others were created: evidence of reconfigured local powers and exchange networks. Further south, on Juani Island (near Mafia Island), the site at Ukunju Cave has yielded two shards of Sassanian-Islamic pottery, as well as glass beads belonging either to the Islamic or Post-Islamic period (no bead can be linked to the Roman trade, despite claims by Chami) (Crowther *et al.* 2014: 36). Some Indian Ocean trade goods from the late first

³¹ Fragments of chains have been discovered at Shanga and Manda (Horton and Middleton (2000: 75).

³² This book thus recounts that a ship sailing to Qanbalū was pushed away by winds to the Sofala coast; after buying 200 slaves, the captain captured the king who had come to trade with the Muslims; this king was later sold as a slave in Arabia (see above). Freeman-Grenville 1975: 9–13. See the book of al-Sīrāfi, ed. Sauvaget 1954: 194, 221, 222, as well as Idrīsī.

³³ “The Zanġ,” writes al-Jāhīz, “are of two main lines of descent, Qanbalū and Lanġūya” (Devisse 1990a: 406–407, quoting G. and J. Ducatez) (perhaps a distinction between Bantus and Austronesians, see below). See also Horton and Middleton 2000: 75. Al-Muqaddasī (tenth century) also mentions slaves in exports from the Zanj country (Sheriff 2005: 17). According to Wink (1990: 14), between 850 and 1000 CE, 10,000 slaves per year left the African coasts (Red Sea and Indian Ocean). The number of these slaves, however, is difficult to evaluate.

³⁴ In the *dār al-ḥarb*, or “house of war,” which extended to the polytheistic regions beyond the borders of the Muslim world, *dār al-Islām*, treaties were seen as basically temporary, and established on a good faith basis (*amān*) by both parties, Muslims and polytheists (Horton 2001: 451–452) (Horton sets these against permanent treaties *ṣulḥ* sealed with monotheistic countries such as Nubia and Ethiopia).

millennium have also been retrieved at the Juani Primary School site, including Middle Eastern ceramics and glass beads, along with TIW pottery (Crowther *et al.* 2012). Most of the beads found at Unguja Ukuu and Fukuchani (Zanzibar) – mineral-soda glass, m-Na-Al 1 (Dussubieux 2010) – came from South India and Sri Lanka (Wood *et al.* 2016). Interestingly, beads such as these have not been found in South Africa: “The bead evidence from Zanzibar and southern Africa suggests that the Zanj and Sofala coasts may have been linked to distinct trading systems in the late first millennium” (Wood *et al.* 2016). Beads found at Tumbe, on Pemba Island, however, resemble beads excavated in southern Africa: this suggests the existence of voyages to Pemba and further to the Sofala coast, as mentioned by Mas‘ūdī (Wood *et al.* 2016). Other beads from Zanzibar – made from plant-ash soda glass – can be compared to the Zhizo beads found in southeastern Africa, showing glass of Middle Eastern origin (Iraq-Iran, for v-Na-Ca subtype A,³⁵ with some beads originating in the Levantine region [v-Na-Ca subtype B]) (Wood *et al.* 2016).³⁶ A few eye beads appear to be similar to beads found at “Takua Pa” (Thung Kuk, Malaysia).

The Lamu region also exported timber to the Persian Gulf: around the year 960, Ibn Hawqal stated that “the houses of Sirāf are constructed in *saj* [wrongly translated by ‘teak’] and other kinds of wood, which are imported from the land of the Zanj” (Horton 1996: 414; Kramers and Wiet 1964: 277). Wood from East Africa was probably sent to Baghdad and Samarra as well. Istakhrī (tenth century) also writes of houses built from African timber at Sirāf. According to Whitehouse, exploitation of the mangrove may explain Manda’s prosperity between the ninth and eleventh centuries. Istakhrī also notes the importing of ivory and ambergris at Sirāf. This site has also yielded a piece of copal, certainly coming from East Africa (Whitehouse 2001: 416, 419).

Discoveries at sites in the continental interior reveal trade relations with the coast, as yet under-researched. Abungu has shed light on the contacts made along the Tana River (Abungu 1990; Abungu and Mutoro 1993). The presence of glass beads at inland sites such as Panga ya Saidi Cave (Kenya) provides insights into trade connections with hunter-foragers (Helm *et al.* 2012: 58). Kiwangwa, in the hinterland of Bagamoyo, was involved in the overseas trade of Zanzibar: this site has yielded glass and blue-green pottery dated to the eighth century. Helm (2000: 286) signals the discovery of beads and glass fragments at Mgombani and Chombo; of Sassano-Islamic pottery at Mgombani, and shards of Chinese Yue ware and sgraffiato from the Persian Gulf at Mteza, in Kenya (Insoll 2003: 159).

Further south, and very early on, the Sofala coast also showed trade relationships with both oceanic networks and the interior. We have evidence for trade through the Zambezi valley at Kalundu, in southern Zambia (a site dated to between the fourth and ninth centuries);³⁷ Kumajulo, southwest of Kalundu (an imported glass fragment from the eighth century, cowries, and copper bars); at Ingombe Ilede (one glass bead, and gold, in layers dated to between 600 and 800); as well as at Katoto, in the upper Zaire

³⁵ “The beads, however, may well have been made elsewhere, since that region is not known for making drawn beads and this glass was widely traded” (Wood *et al.* 2016).

³⁶ Note that no beads from the “Chibuene series” “have been found at any site in East Africa, including the Zanzibar sites” (Wood *et al.* 2016).

³⁷ A shell has been dated to 455 ± 95 CE (Konczacki and Konczacki 2005: 187).

valley (however, this site may be dated to the eleventh and twelfth centuries). Copper and, later on, gold were exploited and exchanged from an early date. Copper crosses (of de Maret's HIIH type), which were objects of prestige probably used as currency within various social contexts, appeared at the Congo–Zambia border as of the ninth century,³⁸ with no apparent connection to oceanic trade networks (Swan 2007a) – but it may be that our data are still incomplete. The metallic items found did legitimize elites who probably controlled their trade (Swan 2007a). Trade relations with the eastern coast seem to have increased between the ninth and eleventh centuries in the Zambezi valley (Kalomo phase), whence slaves were probably carried to Pemba (Lewis 1987: 212–213). The region of Sofala exported copper and gold. Populations from Zimbabwe began exploiting gold “as early as the eighth century south of the Zambezi River, in the Mazoe valley; they appear to have occupied the entire plateau between the ninth and eleventh centuries.”³⁹ According to Swan (1994), during the first half of the first millennium, the Ziwa sites tend to cluster around mineral resources. During the second half of the first millennium, one observes a shift of the Zhizo sites (600–900 CE) toward gold resources; this may indicate gold exploitation and may explain the presence of coastal sites trading with the interior. For M. Wood (2005: 193, 195), “only trade in gold can explain the vast discrepancies in imported goods, especially glass beads, between the south and the north [of the East African coast] . . . Pre-eleventh century assemblages from Schroda and Chibuene alone account for over thirty times the total number of glass beads recorded to date from contemporaneous East African sites.” Coming from the same regions, copper had probably been exploited for centuries (Swan 1994, 2007a). Mas‘udi’s book *The Meadows of Gold and Mines of Gems* is the first Arabic text which mentions a gold trade (see above). Gold from the Sofala coast appears to have had an impact on the economy of Kilwa from the ninth century onward.⁴⁰

Along the Mozambican coast south of the Save River, several ancient sites reveal connections with oceanic networks. To Chibuene and Punta Dundo, already mentioned, Inhambane should be added. “It is likely that coastal trade reached as far south as Cape Correntes” (Horton and Middleton 2000: 100). Chibuene and other coastal sites were in contact with the interior “from 650 on” at the latest (Sinclair and Hakansson 2000: 466). Glass beads (of the Zhizo type) and shells have been excavated in Botswana at Bosutswe, Diamant, Divuyu, Mamagwe, Matlapaneng, Mmadipudi, Nqoma,⁴¹ Taukome, and Toutswa (eighth–tenth centuries); and at Leopard’s Kopje

³⁸ This type of currency remained in use over the centuries between Congo and Zimbabwe (Childs and Herbert 2005: 291). A copper mine was exploited at Phalaborwa (Transvaal) during the eighth century; however, finds of copper items go back earlier in Zimbabwe, Transvaal, and eastern Botswana (see above) (Miller 2003). The discovery of iron and of copper objects at sites on the Tsodilo mountains (sixth–eleventh century, northwestern Botswana) also reveals social complexification and increasing metal production without interference from oceanic networks (2007a: 1006). In addition, Swan notes the emergence of social complexity in the Upemba basin (Congo, to the north of the “copper belt”) during the eighth and ninth centuries, prior to the appearance of cowries in this region (tenth–twelfth century).

³⁹ Niane 1985: 689, according to Summers 1969. See also Swan, previously mentioned.

⁴⁰ For Phillipson (1984: 747), there is no convincing evidence for gold exploitation in Zimbabwe prior to the ninth century.

⁴¹ Mitchell 2002: 290–291. Divuyu has been dated to between the sixth and eighth centuries. Nqoma is dated to a later period (from the ninth century onward). Located on the western border of the Okavango delta, this site is 1,500 kilometers away from Chibuene (Wood 2005).

Main Kraal, Makuru (eighth century), Masheumhlope, Three-Mile-Water, and Zhizo Hill (Zimbabwe).⁴² In the Tsodilo Hills (Botswana), discoveries of “shells of both Atlantic and Indian Ocean origin document connections of ultimately transcontinental scope” (Mitchell 2013: 665). In the Limpopo valley, the site at Schroda (ninth–tenth centuries) (South Africa) contains glass beads of the Zhizo series. The Schroda community exported ivory: ivory objects have been recovered, along with waste from ivory carving.⁴³ According to Huffman (2009), the Zhizo people must have developed elephant hunting for long-distance trade in ivory. It is likely that metals were also in high demand, although only a few copper objects have been retrieved from Chibuene. Class distinctions are not yet visible at Schroda: “commoners had access to glass beads in considerable quantities and the beads were incorporated in both commoner and elite burials” (Sinclair *et al.* 2012: 734). While Pont Drift (Limpopo valley, upstream from Mapungubwe) contains glass beads from the tenth century onward, these belong to the “K2-Indo-Pacific series” (Wood 2011: 72). The Zhizo series beads, made of plant-ash glass containing low levels of Al_2O_3 , have been found only in small numbers on the East African coast, at Pemba (Tumbe, Chwaka), Shanga (one bead), and perhaps in the Comoros. “The southern East African coast represented a trading circuit that was separate from that further north” (Sinclair *et al.* 2012: 734). These beads probably came from the Persian Gulf, either from Iran (Robertshaw *et al.* 2010: 903), or from Suhār, “but the method used to manufacture them is an Indian technology, so it is likely that South Asian artisans were there to produce them” (Wood 2015).⁴⁴ Wood *et al.* have also identified a new glass bead series that is morphologically and chemically distinct; it has been named the Chibuene series. This series may be of an earlier date than the Zhizo series and, apart from Chibuene, has been identified only at Nqoma, in western Botswana (Wood 2012). “A Near Eastern origin for the glass is suspected” (Sinclair *et al.* 2012: 728). A few quartz and carnelian beads have also been unearthed. Chibuene appears to have been the “gateway” for these imports along the southeastern African coast (Sinclair 1987; Ekblom 2004; Sinclair *et al.* 2012). The region of Schroda, the core of a prominent chiefdom, was the first inland region to be “directly connected to trade networks of the Indian Ocean” and coastal ports (Huffman 2000: 19). The discovery of thirty-six leopard skulls at Schroda reveals the probable export of leopard skins, besides that of ivory and other products (mostly metals). This region’s rise to prosperity was also based on the development of regional exchanges and cattle breeding, driven by an

⁴² Malumba and Mwenezi Farm, where beads have also been recovered, are dated to later periods: the eleventh–fourteenth century and twelfth–thirteenth century, respectively (see below).

⁴³ Wood 2000, 2005: 41; Huffman 1973, and 1990: 465–466; Hanisch 1981; Swan 1994: 118; Pwiti 2005: 382. The Zhizo phase began during the seventh century in Zimbabwe. Note that the beads found at some sites in Zimbabwe, previously dated to between the sixth and ninth centuries, have been reassessed by Wood as intrusive and/or dated to later than the Zhizo period (2000: 78): eleven beads from Gokomere Tunnel are dated to between the eleventh and twelfth centuries; those from Mabveni are of European origin and twenty-six beads from Runyani Ruin belong to the Mapungubwe period (thirteenth century); two beads, however, are similar to beads of the Zhizo period (eighth–tenth century).

⁴⁴ Eleven beads from the Zhizo series have been excavated at Tumbe, along with Sassanian-Islamic pottery (LaViolette 2000; Wood 2005). Moreover, “many thousands” of the same kinds of beads have been found at Igbo-Ukwu in the Niger delta, and “more modest numbers from Gao [Mali] and Kissi [Burkina-Faso]” (Robertshaw *et al.* 2009; Wood 2011).

internal logic that was linked to both social institutions and ideology (Beach 1994: 77; Pikirayi 2001: 93). In addition, climatic conditions at the end of the first millennium probably favored agricultural progress (Huffman 1996). Botswana exported raw or worked ivory, as shown by the discovery of bracelets in a cache at Makgadikgadi, dated to the tenth century. Traces of ivory working have come into focus at Bosutswe and Taukome (Reid and Segobye 2000; Insoll 2003: 365). Botswana is rich in copper, sometimes associated with gold, and exports of these metals cannot be excluded. Trade networks extended as far as the region of Durban: the site of KwaGandaganda has yielded a shard from the Persian Gulf dated to the ninth century, as well as a glass bead.⁴⁵ This site has also revealed the presence of copper beads, reflecting long-distance trade within southeastern Africa. According to M. Horton, it is possible that cowries were sometimes used as currency for exchanges with the interior. “By controlling the supply of goods needed in the interior, [the Swahili] developed a reliable group of inland trading partners. They obtained a monopoly over seashells, particularly cowries and conus shells” (Horton 1987: 89).⁴⁶

Iron, even more than gold, was highly valued, playing a major role in trade, and perhaps in structuring communities, along the entire African coast. Mas‘ūdī points out that the Zanj considered iron and copper to be more valuable than gold and silver for ornaments. East African iron was famed for its quality. Discoveries at Galu (on the coast, to the north of Pemba) or at Ungwana seem to show that steel was produced (Kusimba 1999: 104, 190). This interpretation has been cast into doubt: for D. Killick (2009a: 202), the steel that has been found may be from imported tools and weapons whose metal was recycled when the objects wore out. The first levels at Unguja Ukuu (Ia), however, were particularly rich in slag (Juma 2004: 135). According to Kusimba, exports of iron to India developed as early as the ninth and tenth centuries (Lombard 1971: 197; Kusimba 1999: 103). The significance of iron has also been highlighted in the Comoros and Madagascar (see below). Data provided by Arab geographers indicate that the Austronesians took part in trade along the East African coast and particularly along the Sofala coast. Exported from the main coastal cities (Kusimba 1999: 97ff.), iron may at times have come from production centers far from the coasts, for example Botswana, 200 kilometers southwest of Schroda (Huffman 2000: 20), or Dakawa located 150 kilometers inland in Kenya (Haaland 1995–1996). Here again, however, we should remain cautious with regard to these suggested iron exports (in particular toward India, a region well known for the quality of its production). In fact, the writings of the Arab geographers mentioned by Kusimba often repeat Idrīsī’s statement; Idrīsī, who never traveled to East Africa, is the only author who claims that East Africa exported iron (Robertshaw 2009; Killick 2009). Iron transport toward the coast from sites as distant as Dakawa is an issue that has not been truly addressed (Robertshaw 2009).

Archaeological discoveries on the East African coast show the importance of the Persian Gulf and the port of Sīrāf, in turn reflecting the Muslim Empire’s domination over the sea routes of the Indian Ocean and China. Persian interest in the African

⁴⁵ Whitelaw 1994: 34; Miller and Whitelaw 1994: 83; Mitchel 2002: 288. The shard is of the Sassano-Islamic type, a kind of pottery found between 400 and 800 along the African coast.

⁴⁶ At Shanga, Horton has recovered 665 cowries, of which 249 were excavated from the earliest layers.

coast, while not new, was reinforced by these contacts with India and East Asia, where the Persians sold part of the African products, with another part destined for the western markets or remaining in western Asia. Chinese chronicles mention the Persian influence in East Africa during the ninth and ensuing centuries: Duan Chengshi (ninth century) describes the activity of Persian merchants along the coast of Bobali (Berbera). His book, the *Yuyang zazhi* (*Yu-yang-tsa-tsu*), contains one of the earliest known descriptions of the Somali coast. It mentions the practice of blood brotherhood between Africans and foreign traders:

If Bosi [Persian] merchants wish to go into the country, they collect around them several thousand men, and present them with strips of cloth. All, whether young or old, draw blood and swear an oath, and only then do they trade their goods . . . The inhabitants capture women and if they sell them to foreign merchants, they fetch several times their price. The country produces only ivory and ambergris . . . The Arabs make frequent raids upon them.⁴⁷

More than beads or ceramics, textiles had made up the main products imported, and most likely for a long time. The Swahili elites controlled the imported prestige goods, which were only partially redistributed to client groups. Horton and Middleton (2000) and LaViolette (2008) note that the Swahili kept back the diffusion of some types of goods imported from abroad, and produced their own products for trade with the interior and with distant islands (Comoros and Madagascar). A textile industry developed in the Lamu archipelago as early as the ninth century.⁴⁸ Even glass and stone beads, writes LaViolette (2008: 33), “were held largely on the coast until quite late.” The Swahili certainly retained the best fabrics, jewels, and perfumes on the coast. They “[kept] the majority of the Indian Ocean imports in their own settlements,” writes LaViolette, “and allowed only a small trickle of imported goods to [go to] the interior [of the continent]” (2008: 37). Copper alloy vessels and books were also imported (LaViolette 2008).

For the early Islamic period, most of the ceramics coming from abroad (between 10 and 30 percent of the finds in the oldest layers at Manda) originated in the Persian Gulf: Sassano-Islamic, white-glazed and color-splashed pottery, opaque white-glazed pottery (imitating Chinese porcelain), enamelled pottery with green metallic luster, and sgraffiato. The sgraffiato was a type of hatched ware, with an ochre or orange-pink paste; the slip under the glaze was incised or scratched to create a design; this pottery was produced between the tenth and fourteenth centuries in the Persian Gulf.⁴⁹

⁴⁷ Hirth and Rockhill 1911: 128–129; Duyvendak 1949: 13–14. The first Chinese person whose presence in the Red Sea is clearly documented was Du Huan. Made a prisoner in 751 at the battle of Talas River, Du Huan was taken to the Baghdad region. “In 761, he went with Persian notables to the coasts of Sudan and Erythraea. Back in Canton in 762, he wrote an account of his travels, the *Jingxingji*” (Smidt 2001; Pradines 2009: 61). This text has been lost, but passages from it have been preserved, especially in the *Tongdian*, written in 801 by a relative of Du Huan.

⁴⁸ Brown (1985), on Siyu, quoted by Pearson 1998: 123. Horton sees a possible influence of Indian craftsmen (who had settled at Shanga) on increased textile production at this site (see below).

⁴⁹ For the Shanga site, Horton suggests “nineteen different varieties, on the basis of decoration, range of glaze colors and firing conditions” (1996: 284ff.). Manda has also yielded glass from western Asia. Sassano-Islamic, white-glazed pottery, lusterware and sgraffiato have been found on Pemba (Fleisher 2004a: 267–269) and at Unguja Ukuu (Juma 2004). Among the types of glass excavated at the latter site,

Ceramic ware from eastern Asia, primarily transported via the Persian Gulf, were also present: 25 percent of the imported ware is of Chinese origin in the earliest layers at Manda, which contained painted pottery from Changsha (dated to the ninth century at Shanga); olive-green glazed jars called “Dusun” (these jars, used in the Indian Ocean trade, are quite common in Srīwijaya and are dated from the eighth through tenth centuries at Shanga; they have also been found at Pate [Horton 1996; Wilson and Omar 1997]); green Yue pottery (dated from the mid-ninth century to the end of the twelfth century at Shanga); and white Ding pottery (termed “white porcelain” by Chittick, dated from the tenth to the twelfth century at Shanga).⁵⁰ At Zanzibar, Unguja Ukuu has yielded a shard of white-glazed stoneware, and a few shards of “Dusun” pottery.⁵¹ Chinese pottery has also been unearthed at Bui, Kiungamwini (Lamu archipelago), and Mro Dewa (Comoros) (Rougeulle 1991: 332), where a bronze mirror has been discovered (Chanudet and Vérin 1983).

Moreover, Shanga and Manda have yielded Indian pottery already found in the oldest layer (Forslund 2003: 20), revealing probable contacts with South Asia (see below).

Imported ceramics made up only a small part of the discoveries. Locally produced ceramics were much more abundant, especially the Triangular Incised Ware (which Horton calls Tana Tradition Ware). H. Wright notes that the ratio of imported ceramics to local pottery decreases as one progresses southward, with a particularly high ratio at Manda (Wright 1993: 664–665).

While the African character of the incipient Swahili culture is clear, there is no doubt that elements coming from Arabia, Persia, and India played a role in its formation. Arab and Swahili traditions report that members of minority Muslim communities fleeing persecution came to settle in East Africa. More often, they were merchants coming for trade.⁵² As already noted, Mas‘ūdī speaks of a community of Muslims at Qanbalū (perhaps Omani Ibadiis of the Julanda family) who conquered the Zanj of the island and spoke their language.⁵³ Horton also suggests the arrival of Ibadiis during the eighth century, and later that of Zaydis from Yemen during the ninth century (here, based on Barros, *Decadas da Asia*, written in 1552). According to Horton and Middleton (2000), the first coins found at Shanga, dated to the ninth century, are somewhat similar to Zaydi coins from this period. Following the creation of a Zaydite state in Yemen during the tenth century, Zaydi communities may have settled along the Somali and Kenyan coasts (Horton and Middleton 2000: 62). For Insoll (2003: 175),

some probably came from the Persian Gulf. Pate has also yielded Sassano-Islamic pottery (Wilson and Omar 1997).

⁵⁰ Also white porcelain (it is rare: only three shards have been recovered at Shanga, dated to the eleventh century). For a typology of Chinese ware, see Horton 1993: 303ff.

⁵¹ As already noted, Chinese stoneware had already appeared at this site in pre-Islamic layers (Juma 2004: 107). A Chinese coin dating to the Northern Song period has also been excavated at Unguja Ukuu.

⁵² Some authors such as Trimmingham (1975: 123) do not believe that there were significant migrations of Muslims from persecuted minorities: Trimmingham argues that it was easier for them to seek refuge within their religious communities in their regions of origin than to migrate overseas. His reasoning disregards the trading traditions of some of these communities.

⁵³ Mas‘ūdī 1962, 1: 84; Horton 1996: 421; Allen 1993: 181; Horton and Middleton 2000: 65. Ibadi Islam may have spread to Pemba, Zanzibar, and Mafia.

however, the link to coins from Sind suggested by Brown (1992) appears to be more convincing: it is a connection confirmed by Hawkes and Wynne-Jones (2015). Horton (1996: 377, 421–423) has himself noted that a comparison of coins from Shanga and Manda, dated to the tenth century, points to links not only with Yemen and the Red Sea, but also with Sind, where Multān paid tribute to Egypt and minted coins in the Fatimid style.⁵⁴ Beyond these influences, Perkins (2015) points out the particularities and innovative character of East African coins. In addition, Pemba and Zanzibar have yielded Abbasid and Fatimid dinars and dirhams. J. de V. Allen has alluded to the fact that Africans who had settled along the coasts of the Persian Gulf and who returned to East Africa may have contributed to the process. There is no conclusive evidence yet for this hypothesis, although Africans have been mentioned at Sirāf around the end of the first millennium (Ricks 1970; Allen 1993: 186). Taxation rules at Suḥār in Oman during the ninth century, however, may reflect the presence of Africans at that time (Wilkinson 1981; Horton and Middleton 2000: 51). African ceramics of the Tana type have also been discovered in Oman, at Ras al-Hadd⁵⁵ (ninth century), and slightly later (tenth century) in South Arabia, at Sharma, which has also yielded large quantities of copal resin from the East African coast.

Linguistic data reveal radical changes following contacts with oceanic networks. Among the loanwords listed for the Proto-Swahili period, we find Persian terms (such as **pamba*, “cotton,” from the Persian *panbah*; **bwana*, “man,” from Old Persian *ban*); Arabic terms (**lubani*, “incense,” from the Arabic *luban*; **muṣenzi*, *mṣendi* [northern dialects], *mṣenzi* [southern dialects], “barbarian,” from the Omani *msenzi*; **musikiti*, “mosque,” from the Arabic *masjid* or *masgid*); and Indian terms (**mjoli*, “female friend,” from the Hindi *joli*; **idafu*, “unripe coconut,” from the Hindi *dab*). The word **kanzu*, “men’s gown,” may derive from the Arabic *qandura* according to Nurse and Hinnebusch (the Malagasy *akanjo* probably came from the East African coast). Among the innovations that may go back as far as Proto-Swahili, Nurse and Hinnebusch have listed the terms **mulungwana*, “freeborn person,” **mutumwa*, “slave,” **icungwa*, “orange,” and **ijimbi*, “taro.”⁵⁶ The term **muTepe*, “seagoing vessel,” mentioned as an innovation, seems to be borrowed from the Arabic, perhaps transmitted at an earlier time (see above).

During the tenth century, the Red Sea gained a new importance in Indian Ocean trade, under the impetus of Tulunid and Fatimid Egypt, and of Yemen. The demand of these regions for products from East Africa – especially gold⁵⁷ – certainly boosted

⁵⁴ The same type of tiny coins known at Shanga and Manda has been recovered in a treasure excavated at Tanga (Horton and Middleton 2000: 78–79).

⁵⁵ Sutton 1998: 121; Chami 2001: 17; Whitcomb 1975. For Horton (2001: 456), Zanj elements may have come into play in the Qarmatian expansion toward East Africa during the eleventh century.

⁵⁶ Nurse and Hinnebusch 1993: 293–297, 317. Another notable borrowing is **bibi*, “woman, wife,” from the Persian or from an Indian language. Other terms given as innovations are the terms **mivvinje*, “*Casuarina* tree” (*C. equisetifolia*, a tree originating in Southeast Asia and the Pacific), and **ntapa*, “tree or leaf from *Borassus*” (*Borassus flabellifer* L., sugar palm, is a tree originating in India or Southeast Asia; its fibers are used for making textiles; *Borassus aethiopum* Mart. is an African species, with edible fruit).

⁵⁷ The Fatimids first imported gold from the empire of Ghana in West Africa. Ivory and rock crystal were also imported from East Africa (Horton 1987).

activity in the ports along the Zanj coast and fueled an expansion toward the Comoros and Madagascar. African gold was minted at Athar, in Yemen. East African coins that appear to have been influenced by the Fatimid world and Sind have been mentioned above. However, the networks of the Persian Gulf continued to dominate the African coast. Stone buildings appeared at Manda around the end of the tenth century. The introduction of coral in building construction at this time shows input from the Red Sea (Horton 1996), and perhaps also from Bahrain and Sīrāf, in the Persian Gulf (Pradines, Kervran, p.c.).⁵⁸ Some painted glass items from Manda probably have an Egyptian origin (Chittick 1984: 164). Fleisher notes that TIW pottery was abandoned during the ninth and tenth centuries, when the first stone towns were appearing. It was also during this period that the dispersal of Swahili speakers began (Fleisher 2004a: 56–57). At Kilwa (Ia period: ninth–tenth century) and Manda (I period), the presence of chlorite schist has been attributed by Chittick to South Arabian influences (Chittick has related the discoveries of chlorite schist during the ensuing periods to Madagascar) (Chittick 1974, 11: 413; 1984: 191). At Unguja Ukuu, two fragments of chlorite-schist vessels have been found; one vessel probably came from Madagascar, the other from the Persian Gulf.⁵⁹ Fragments of chlorite schist have been excavated in the first levels of Chibuene, where Arca-impressed ware has also been recovered.

Austronesian elements were certainly involved in the formation of the Swahili culture, whether these Austronesians came from insular Southeast Asia or Madagascar. This leads us to wonder whether the quartz found in layers dated to the tenth century at Shanga and Manda originated in Madagascar (Allibert 1988a). The arrivals of Asian plants on the East African coast at earlier times have already been mentioned. These arrivals probably continued from the eighth through eleventh centuries.

The Indians and East Africa

India's imprint has probably been underestimated for this period (Hawkes and Wynne-Jones 2015): along with Persians, Arabs and – to a lesser extent – Austronesians, Indians were already visiting the East African coast. Carnelian beads, probably from Gujarat (and ultimately from the city of Ujjain, and later Limudra) have been found at various sites, sometimes inland. J. Walz recovered eight carnelian beads in eighth–tenth-century layers at the site of Kwa Mgogo in the Pangani valley (Tanzania), and F. Chami reported the discovery of one carnelian bead at the Misasa site, dated to between the eighth and ninth centuries, in the Tanzanian coastal hinterland (Bagamoyo District). Unguja Ukuu has also yielded carnelian beads (sixth–tenth century) (Juma 2004). Indian ceramics have been recovered at several sites (Manda and Unguja Ukuu), especially water jars, and a variety of red polished ware originating in Gujarat. Red burnished ware of Indian origin

⁵⁸ The first use of coral for buildings on the East African coast may be dated to around 920 (Horton and Middleton 2000: 79; Horton 2001: 460). The use of coral is known in the Red Sea and the Persian Gulf.

⁵⁹ Juma 2004: 144. The fragment attributed to the Persian Gulf is decorated with points within double circles, a pattern known on vessels much older belonging to the *série récente* group (second millennium BCE).

would become more visible from the eleventh century onward, at sites such as Shanga, Mtwapa, Pate, and Kilwa (Juma 2004).

Texts and oral traditions reveal that people traveled from India and Sind toward the Swahili coast. A seventh-century Indian text thus speaks of a merchant who sailed as far as the “island of the Black Yavanas” (Basham 1967: 229). Oral traditions from the islands and coast south of the Kenyan/Tanzanian border describe the violent irruption of the Wadebuli onto the East African coast. This name, meaning “people of Daybul,” refers to an ancient city at the mouth of the Indus River. After the Arab Muslims captured Daybul in 711, it became a major port for Muslim trade in the Indian Ocean (see above). Depicted as hated and feared for their cruelty, the Wadebuli arrived on sewn boats with square sails made of mats. They forced the Africans to dig wells and transport stones for the construction of mosques and other buildings. On Zanzibar and Kilwa, their arrival is given as earlier than that of the Shirazi. In a critical review of these traditions, J. de V. Allen believes that the Wadebuli were in fact Swahili from the northern regions.⁶⁰ Whether or not the Wadebuli were Indians, their name reflects the existence of early connections with India and the significance of the city of Daybul. J. Kirkman (1970) has noted that the sgraffiato found in the oldest levels at Gedi and Kilepwa (near Malindi), at Ungwana (at the mouth of the Tana River), and Ras Mkumbuu (on Pemba) was similar to that excavated in the upper levels of the Daybul site.⁶¹ Kirkman places the arrival of the Wadebuli during the formative years of the Seljuk Empire in western Asia (eleventh century). This period coincides with the temporary suspension of gold imports from Central Asia into India: the Indians may then have been tempted to go and fetch gold, as well as ivory and slaves, on the East African coast. As R. Pouwels notes (2002: 394, 396), traditions linked to the Wadebuli suggest that Indians from Sind were involved in the slave trade. As already mentioned, there was a curious taboo concerning the transportation of coconuts in ancient East African ships called *mtepe*, hinting at Indian or Austronesian forays into the African coasts.

Traditions also relate the arrivals of Wadiba, etymologically “people of the islands”: the Arabic-Persian *diba* refers to the Maldives (from the Sanskrit *dvīpa*, “island”). Shipwrecked Wadiba have been mentioned among the Bajun in reference to the origin of the sewn ships called *mtepe*. Further south, on the coast, traditions paint the Wadiba as tyrannical invaders, quite unlike early descriptions of the Maldivians. According to Gray, the Wadiba reached Pemba prior to the arrival of the Wadebuli. One wonders whether the Wadiba described here might have been Austronesians transiting through the Maldives or the Chagos on their way to East Africa, the Comoros, and

⁶⁰ Allen 1993: 170ff. Allen points out that not a single tradition related to the Wadebuli has been recorded north of the border between Kenya and Tanzania.

⁶¹ Similar shards have been recovered at the port of Tiz (eastern Persia), which reached its greatest level of activity during the twelfth century. The port of Daybul was abandoned by the mid-thirteenth century, perhaps due to problems of silting. A. Wink (2004: 15) has rightly insisted that the changing state of the deltas of India’s great rivers – and around the Indian Ocean rim generally speaking – led to some urban instability. S. Pradines’s excavations (2001) reveal a first phase of occupation at Gedi by the late tenth century; research has unearthed hatched sgraffiato and Islamic monochromes, as well as Yue and Longquan celadons.

Madagascar. More generally, as R. Pouwels suggests (2002: 400–401), the traditions relative to the Wadiba may reflect the increasing significance of an India-Madagascar route running via the Maldives, at a time Pouwels places during a period spanning the thirteenth to fourteenth century; these connections may actually go as far back as the eleventh century, during the Chola expansion.

From the eighth to the tenth century, Persian Gulf merchants held the upper hand on commerce with China and the “land of the Zanj.” Archaeological data also show that Indian merchants, Muslims or Hindus, were active in this trade. At Shanga (Pate Island), according to Horton, “Indian bead-drilling technology, for both rock crystal and carnelian, can be noted by the tenth century” (Horton 1996: 418). Metallurgy reflects similar contacts, as seen in a lion figure excavated at the same site.⁶² It may be that Indian craftsmen worked along the East African coast. While this lion resembles figurines known in the Deccan, the lion it features is an African lion, and may have been cast from melted Chinese coins (Hawkes and Wynne-Jones 2015). Shards of Indian pottery at Manda may indicate direct contacts with India. A type of Indian pottery also known at Suhār (red polished ware) has been excavated at the site of Unguja Ukuu (Zanzibar) dated to the Ia period (c. 500–750) (Juma 2004), as well as Indian beads (carnelian beads, one decorated with white lines, and glass beads of the “Indian red” type). Exchange networks brought the Indian zebu into East Africa (the zebu was present in the Horn of Africa as early as the first millennium BCE) as well as various cultivated plants, coming either directly from India or arriving via Arabia: these included hemp; sesame; and pulses such as *Cajanus cajan* (L.) Millsp. (pigeon pea), *Vigna radiata* (L.) Wilczek, and *Vigna umbellata* (Thunb.) Ohwi and Ohashi.⁶³

The development of the East African coast sheds light on the appearance in the Comoros and Madagascar of merchant towns belonging to transregional trade networks; most of the ceramics imported along the East African coast, from the Islamic world and from eastern Asia, can be found in the Comoros and to a lesser extent in Madagascar. These towns also acted as hubs for local networks. One of the striking results of the recent investigations carried out on the East African coast has been the discovery of the relationships that were established between the coast and the hinterland as soon as trade-oriented coastal settlements were formed. Similar networks probably took shape in Madagascar after the farmers’ initial settlement inland. However, this settlement happened in a manner quite unlike that of East Africa, where the coast was populated by inflows of people from the interior. In the Comoros, islands of smaller size, and in Madagascar – where the hinterland was only progressively populated – the expansion of trade towns was fueled by networks linking coastal settlements or settlements located along great rivers, near their mouths.

⁶² Horton suggests movements of Indian artisans in the Indian Ocean.

⁶³ The Arabs contributed to the spread of *Citrus*, which originated in Southeast Asia. Cultivated plants of Asian origin have usually been introduced many times into East Africa and Madagascar. Sesame and hemp have long been present on the East African coast (see above).

The Comorian Hub

The expansion of Swahili culture and language, paired with the rise of Islam during the eighth and ninth centuries, went along with the arrival of African, Arab, and Persian people in the Comoros. In connection with the Persian Gulf especially, a trade current swept down the East African coast, reaching the Comoros and Madagascar; Austronesians – who may have settled on the East African coast – were probably involved in this current, dubbed the “Swahili corridor” by Horton (Allibert, p.c.).

Various African inflows contributed to the formation of Comorian, which is a Bantu language; it split off from Sabaki, in the region of the Lamu archipelago, around the ninth century.⁶⁴ Contacts with southern Swahili dialects occurred later. According to G. Rotter, most of the Bantu elements in the Comoros arrived from the part of the East African coast located between Lindi (Kilwa region) and the mouth of the Limpopo River (Rotter 1976: 381). These arrivals may have been partially connected to the Sofala and Kilwa trade. A Comorian chronicle studied by Gevrey (1870) mentions early arrivals of non-islamized Africans on Grande Comore: the Wamizi, and later the Tungi, from Mrima country (Mozambique, between Pemba and Cape Delgado),⁶⁵ as yet unconfirmed. “While the eastern dialects [in the Comoros] (Mayotte and Anjouan) are related to languages of the Kenyan coast, the dialect of Grande Comore and Moheli reflect Mozambican influences” (Vérin 1990: 43).

Accounts of traditions related to pre-Islamic Arab arrivals have been collected, and according to chronicles from Anjouan, chiefs called *beja* ruled the island before the islamization of the Comorian archipelago. Later, “lords called *fani* (or *fey*, *fe* on Grande Comore), probably Muslims, became the new rulers; one of them bore the title *pir* (linked to Sufi traditions specific to Persia and India)” (Allibert 1988a: 113–114).⁶⁶ It is possible that the term *beja* first “applied to the entire population . . . who lived there prior to the Shirazi.”⁶⁷ Allibert has recently suggested (2015) a link with the word *beja* referring to the “inhabitants of a region between the Nile and the Red Sea on the one hand, and Upper Egypt and Erythrea, on the other” (Miquel 1975, 11: 44 n. 3). According to local traditions, transmission of power was matrilineal, and this would later be the case. Damir reports that Mdjonga, a chief from Africa, created a matrilineal community including seven villages, in the south of Ngazija. His companions founded the same type of communities in the other islands.⁶⁸

In the various islands, a balance would later be struck between matrilineality from the Bantu world and inheritance of power along the male line – the rule in the Muslim world. On Anjouan, however, the footprint of the Hadramis was preeminent and upset

⁶⁴ Nurse and Spear 1985: 60, 65; Nurse and Hinnebusch 1993: 495. Vérin (1994a: 54) also links the Dembeni people to Bantus of the Sabaki branch, originating in the Tana River region.

⁶⁵ Tunghi Bay is located south of Cape Delgado, and Vamizi Island is located further south, facing the Zambezi River.

⁶⁶ The order between *beja* and *fani* varies according to the chronicles. Vérin (1994a: 63) thus gives an order *fe/beja* for Grande Comore.

⁶⁷ Damir, Bouludier, and Ottino 1985: 38.

⁶⁸ The chiefs of these matrilineal communities, the *fe*, chose a supreme ruler, the *mfaume* (cf. Swahili *mfalme*, “king,” mentioned by Mas’ūdi) (Vérin 1994a: 63).

this balance : “the Bantus were symbolically repelled in the mountainous interior of the island” (Vérin 1994a: 64).

The Swahili who arrived during the eighth and ninth centuries were probably attracted by trade networks set up by the first inhabitants of the Comoros and Madagascar, first of all the Austronesians. Migrants from the East African coast may have found not only hunter-gatherers on the islands, as some Comorian traditions relate, but also Austronesians mastering sea navigation, agriculture, and iron metallurgy; however, an initial Bantu presence cannot be ruled out on these islands (see Volume 1); this idea is advocated by various authors (see Liszkowski 2011, for example). Nor can we exclude the arrival of a mixed Austronesian/Bantu population. Archaeology has uncovered evidence of an ancient Austronesian presence in the Comoros. Sites excavated on Mayotte – Dembeni (ninth–thirteenth century), Koungou (eighth century), and Majikavu (possibly eighth century) – have yielded chlorite schist that had already been imported from Madagascar during the eighth century (this importing continued until the late thirteenth century; active trade relations would later flourish with Madagascar, based mostly on the slave trade). Quartz from Madagascar has been recovered at Dembeni and Bagamoyo (recent excavations led by S. Pradines [2012] have confirmed the significant presence of quartz, part of which was probably reexported to the East African coast, as C. Allibert has suggested). Quartz was used for bead manufacturing, as well as in iron metallurgy (in Africa, quartz is used as an adjuvant in the reduction of iron ore [Allibert *et al.* 1993: 16]). Quartz also had other uses, particularly in rituals. In Madagascar, this mineral, called “the living stone” (*vato velona*) in the Highlands, is often used by medicine men [diviner-healers]; it is sometimes incorporated into the walls of a house during its construction; in Imerina, quartz was set next to a lamp placed on a banana “trunk” during the circumcision rite.⁶⁹

Skeletons discovered at a seashore site on Ngazija (Mbeni) show African features: these individuals had had their incisors deliberately removed; positioned on their back, the corpses had their heads turned toward the southeast; this population was not Muslim (or at least did not comply with Muslim rites, as Insoll notes [2003: 171]).⁷⁰ Moreover, the remains of several species of turtles from the west Malagasy coast have been retrieved on Mayotte, where they had been brought as food (*Geochelone inyphora*, a species still present today in the Bay of Baly, and discovered in layers dated between the ninth and thirteenth centuries at Mahilaka; also found was a Malagasy *Pyxis*, at Dembeni). Lemurs and tenrecs, the latter small, hedgehog-like creatures originating in Madagascar (*Tenrec ecaudatus* Schr.), have also been discovered on Mayotte; these animals, in principle, cannot be eaten by Muslims (although for some Comorians today, they are illegal delicacies).⁷¹ The Comorian name for the tenrec is *land(r)a*; it “is much closer to the generic Malay term for porcupines, *landak*, than the Malagasy reflex

⁶⁹ Molet 1979, 11: 83. According to a legend regarding Andriandranoala, the first Vazimba chief in the Ankaratra, this chief had his body left in a canoe in the middle of the forest. “A strong wind stripped the trees and covered the canoe with leaves. The following day, people arrived at the place and found that the leaves had changed into quartz.” The chief’s tomb became a place of pilgrimage (Callet 1981: 14).

⁷⁰ See Wright 1992: 84, quoting a communication from Boulinier, and 1995: 663.

⁷¹ Allibert and Vérin 1996: 465. The layers dated to the ninth and tenth centuries at Sima and Domoni (Anjouan) also contain remnants of tenrecs (see below).

(*t(r)andraka*) of the same Austronesian root, suggesting that [the word] may have been borrowed directly from Malay, or perhaps from a very early form of Malagasy” (Walsh 2007: 99). The guinea fowl (*Numida meleagris*) was not introduced by men from East Africa into Madagascar, as previously claimed: remains of guinea fowl dated to 8000 and 11000 BCE have been identified in a rockshelter in southwestern Madagascar (Goodman 2013). The guinea fowl bears the name *nkanga* in the Comoros, and *akanga* in Madagascar; both derive from a Sabaki language (on the southeast Malagasy coast, the guinea fowl is called *vitro*, a name of undetermined origin).

The culture belonging to the “Dembeni phase” has been found on the four islands of the archipelago. This Dembeni period, for the ninth and tenth centuries, has been linked to the first period of the Manda and Kilwa sites on the East African coast.⁷² Sizeable communities were present on every island. No internal social differentiation can be seen at the sites excavated (Wright 1992: 84). Besides the villages previously mentioned on Maore (Mayotte), other significant settlements were Mbashile, Nzindani, and Mbeni (ninth–tenth century) on Ngazija (Grande Comore); Vieux Sima and Mwali Mdjini (ninth–nineteenth century) on Nzuwani (Anjouan); and Mro Dewa on Mwali (Moheli).⁷³ Two C₁₄ analyses from charcoal samples at Mbashile and Sima have yielded datings in the first and sixth centuries CE; however these datings have been questioned.⁷⁴ These sites may prove to be older than previously thought.

Communities settled primarily along the seashore; excavations have yielded quantities of shells and fish bones. The Comorians belonging to the Dembeni culture grew millet (probably of African origin); sesame (a plant originating in India, that arrived in Africa at an early date); and rice and coconut (Asian plants). Remnants of *Citrus* (at Sima) and bamboos also point to Asian influences (C. Allibert has suggested bamboo cultivation at Dembeni). The Dembeni people raised zebus (at Dembeni I, cattle bones have been recovered from a layer dated to 830–870 CE), goats (probably introduced from East Africa), and chickens. Comorian traditions establish a link between the arrival of cattle and that of Islam (Blanchy 2011). Vestiges of a bird that appears to be an African goose of the genus *Plectropterus* have been discovered at Dembeni (Wright 1984: 53). Sea turtles were eaten and their shells probably exported. Large amounts of turtle remains, sometimes burned, may also indicate the production of oil for ship caulking (Redding and Goodman 1984: 51). Rectangular houses have been found at Dembeni, perhaps reflecting an Austronesian influence.

Various types of locally produced pottery have been excavated. H. Wright singles out a type of pottery that is decorated with incisions or Arca-shell imprints, with a burnished interior (incised and impressed patterns can be combined). Wright has

⁷² Allibert and Vérin 1993a: 73. On the Dembeni culture, see Wright 1984.

⁷³ For Mayotte, see Allibert *et al.* 1983 and 1989. For Moheli, Chanudet and Vérin 1983; Chanudet 1991. The western part of the Mwali Mdjini site has yielded a dating of 1190 ± 140 BP. The ceramics that have been found would tend to date the site to the late ninth or early tenth century. On Sima, see below.

⁷⁴ 1440 ± 60 BP (Beta 4665) (calibrated 580 CE) and 1960 ± 70 BP (Beta 4666) (calibrated 40 CE) (Wright 1984: 55). Sea water may have altered the datings (as is the case with sea shells) or the trees that had been cut were very old. The corrections at Sima yield a ninth-century dating (Vérin 1994b).

noted that Arca shell-impressed pottery is found less frequently as one proceeds westward, from Madagascar and Mayotte to the East African coast. Vérin has also pointed out that a type of pottery of globular shape, with a short neck and Arca shell-impressed decoration (“Majikavu” style) is found only on Anjouan and Mayotte, and in northern Madagascar, “and later, in more simple shapes, in what has been termed ‘Hanyundro style’, also found in the Comoros” (Vérin 1994a: 55). We may have here a “relevant character of the Austronesian influence.”⁷⁵ The Arca shell-impressed pottery discovered at Shanga may have come from the Comoros (Horton 1996). It has also been found in the oldest layers at Manda (Chittick 1984). Jars with high necks showing incisions with a laddered design in zigzag patterns surmounting lines of dots are observed only in the western Comoros; they have parallels at Kilwa I and Unguja Ukuu (Martin 2010: 176). A pattern of intertwined incisions or showing cross-hatched triangles (TIW, or Tana pottery) is known on Grande Comore, Moheli, and Maore (Koungou site), and on the East African coast (Martin 2010: 123, 165ff.; Allibert, p.c.).⁷⁶

Another type of pottery, called “graphited red slip ware” (the graphite is coated, or forms bands) is characteristic of the Dembeni culture, and comes in the form of flare-lipped bowls (the graphite decoration is less frequent on Grande Comore). Here one observes neither incisions nor impressions: “Decoration is based upon an interplay of colors – red and graphited black.”⁷⁷ As previously noted, limited quantities of red burnished pottery with bands of graphite have been found at Shanga (dated to between the eighth and eleventh centuries, Manda (between the ninth and thirteenth centuries), Kilwa (between the ninth and thirteenth centuries, and from the fifteenth century onward)⁷⁸ and, more importantly, at Mtambwe Mkuu and Tumbe on Pemba Island (shallow bowls are most frequent). This style of pottery has also been excavated at Unguja Ukuu (Zanzibar) in the oldest layers of the site (sixth–eighth century); the use of graphite remained the norm on bowls during the following phase, dated to the eighth–ninth century (Juma 2004: 91, 98). For this period, Fleisher and Wynne-Jones (2011: 271) note that “red and graphite burnished bowls form a significant percentage of vessels at three sites: Manda, Tumbe and Unguja Ukuu.” These bowls likely represent a “form of consumption of nascent elites” (2011: 275). This type of pottery is also present “in the first levels” at Gedi (south of Malindi) (tenth/eleventh century), at Sanje ya Kati (Martin 2010), and in Mozambique, at Chibuene (ninth?–fifteenth century?).⁷⁹ Hawkes and Wynne-Jones (2015) also note that this type of pottery reflects individual consumption. While these ceramics do not mimic Red Polished Indian Ware, they may reflect similar practices. But do we observe the same kind of ceramic both here and

⁷⁵ Wright 1984: 34–35; Allibert 1992: 40. Vérin (1994a: 55), however, holds the reverse opinion: he claims that the presence of Majikavu pottery on Madagascar indicates an ancient Bantu presence on the Great Island.

⁷⁶ Decoration featuring crisscross patterns and hatched panels was in use until the thirteenth century along the East African coast (Manda, Kilwa), whereas decoration using incised triangles usually disappeared around the tenth century (Martin 2010).

⁷⁷ Allibert *et al.* 1989: 22. Vérin (1994a: 55), however, signals the existence of vessels showing intermediary styles: “pots painted in red and black with denticulate or herringbone patterns.”

⁷⁸ Horton 1996: 253–254. For Kilwa, Chittick 1967: 28–29; 1974: 323–325. For Manda, Chittick 1984: 113, 119.

⁷⁹ For Chibuene, Sinclair 1982: 153, 155, fig. 6. This type of pottery has also been found in northern Mozambique at sites dated to the twelfth century at the mouth of the Lurio River, and at Lumbo (fourteenth century), opposite Mozambique Island (Sinclair 1991) (see below).

there? Indeed, Horton connects the graphited pottery of Shanga to the Comorian tradition, and Fleisher suggests the same connection for pottery from Pemba.⁸⁰ For V  rin and Chanudet, however, “whereas there are similarities between Red Dembeni pottery and the ceramics found at Manda and even Kilwa, their identity is far from absolute.” Nevertheless, the authors speak of an “East African style” for this graphited Comorian pottery.⁸¹ Conversely, in Madagascar, according to Allibert (p.c.), one finds no Red and Black Dembeni pottery in Irodo or elsewhere. However, another type of red slipped pottery showing some graphite decoration has been excavated in Anosy for the Maliovola phase (ninth–twelfth century); in Androy (at Andranosoa, Andaro, Amanda, and other sites); and in northwestern Madagascar (on Nosy Be Island); and perhaps also at Mahilaka, although here the graphite can no longer be seen on the ceramics.⁸² The use of graphite does not appear to arise from an Austronesian influence: “one does not know of any graphited pottery in Southeast Asia” (Manguin, p.c.). It would seem logical to seek an East African influence on Madagascar. There are no sources of graphite in the Comoros, but some sources are known in Madagascar. Graphite is present, not only on ceramics from the East African coast, but also on those from the hinterland, for example in the Usambara (on pottery of the TIW type) and in the Southern Pare Mountains during the ninth century (Forslund 2003: 12). The use of graphite may even be older in Tanzania, if we follow the suggestion of Chami and Kwekason (2003). Red-slipped bowls with graphite decoration have recently been unearthed at Sharma, an entrep  t founded by Iranians on the Hadramawt coast during the late tenth century: they attest to contacts linking the Persian Gulf, South Arabia, and the Swahili coast (see below). It is likely that Africans lived in Sharma, either as slaves or as freemen (Rougeulle 2004; Regert *et al.* 2008; Fleisher *et al.* 2014; Rougeulle 2015).

Many questions remain unanswered for this type of pottery: does it belong to one tradition, or to several? What might its origin be? Did it spread throughout the western Indian Ocean at various times, and is it the same East African tradition that lasted for centuries? Chittick notes that while this decoration using graphite became rare at Kilwa during the fourteenth century, it was revived during the fifteenth century, with a different style (Chittick 1974: 323). As C. Allibert points out, it is difficult to suggest filiations before the various types of ceramics have been precisely compared. For Forslund (2003: 39), graphited bowls from the Comoros are of three types: the first resembles Type No. 11 at Manda – where Chittick describes it as the “the chief open bowl of the finer sort in the early period” (1984: 120); the second type shows similarities with pottery from Chibuene (1b and 2ai groups) and with Kilwa Type No. 9 (Periods I

⁸⁰ Fleisher 2004a: 249–250. Fleisher points out that this type of pottery is abundant on Pemba (from c. 800 until 1050) and Manda, but rare elsewhere along the East African coast. Pemba has also yielded chlorite schist (probably of Malagasy origin) in significant amounts (Horton 1996: 354).

⁸¹ Chanudet and V  rin 1983: 54. See also Chanudet 2001: 192: “red Dembeni pottery dated to the ninth–tenth centuries in the Comoros shows similarities with pottery from the East African coast (which may be the original model). Its graphite decoration also suggests a strong link with Madagascar.” Rather, it is the use of graphite noted in Madagascar which suggests a link with East Africa and the Comoros (see below).

⁸² It is possible that the red-slipped pottery at Mahilaka sometimes bore graphite decoration, “almost invariably obliterated” (vessels of Type 4) (Radimilahy 1998: 178), and that these types of ceramics have some connection with Dembeni pottery (V  rin and Wright 1999: 36).

and II) (itself similar to Manda Type No. 9); the third type of graphited bowl may also be linked to Type No. 9 from Manda. The shape typical of Comorian bowls is rare at Mahilaka (Categories 6 and 7). Forslund feels that the concept of graphited bowls is a Comorian innovation (2003: 42), although graphite had been used earlier along the East African coast.⁸³ Note that graphite had to be imported into the Comoros (see above).

N. Martin suggests that the red-slipped pottery tradition be viewed separately: it forms 48 percent of the assemblage in the oldest layers at Mahilaka. This type of pottery is known in the Comoros, and along the East African coast, at Shanga (between the end of the ninth and the twelfth centuries), Manda (from the ninth century onward), Kilwa (throughout its history), and Chibuene, for example. C. Radimilahy (1998: 210) hints that this red-slipped pottery “which is characteristic of Malagasy sites from the tenth to the fifteenth centuries” may reflect an Austronesian tradition (it was present in northeastern Madagascar as early as the Sandrakatsy phase dated between the ninth and eleventh centuries, and in the Maliovola phase in Anosy during the eleventh and twelfth centuries).⁸⁴ Martin notes decreasing amounts of this type of ceramics from the Comoros and northwestern Madagascar to the East African coast, where the application of red slip would become more frequent from the eleventh century onward (2010: 197). However, this evaluation seems inconsistent with the large number of sites where this type of pottery has been observed, such as Kilepwa,⁸⁵ Ungwana, Ras Mkumbuu, Kisimani Mafia, as well as the sites already mentioned (Chittick 1974: 323). P. Sinclair has pointed out the presence of this pottery from the end of the first millennium onward, between Somalia (Gezira) in the north to Chibuene in the south, a type of pottery also seen in the Comoros and Madagascar (Sinclair 1991: 192). The shapes of the bowls of this red-slipped pottery are similar to ceramics found in India (Hawkes and Wynne-Jones 2015).

Shards of other ceramics recovered at Sima (Anjouan) show similarities with those of the Malagasy sites of Mahilaka and Irodo. Moreover, the remains of tenrecs (Sima) and pigs (Mbashile) have been unearthed (only one pig incisor, in fact, which may have been used as an ornament) (Wright 1992: 116, 118): it appears that the inhabitants were not (or not all) Muslims (the site has been dated to the ninth and tenth centuries for the earliest levels).⁸⁶ Moreover, C. Chanudet has noted that at Mwali Mdjini (Moheli) Dembeni potters imitated chlorite-schist vessels (1991: 91).

⁸³ According to Forslund (2003: 18), red-slipped pottery with graphite decoration “is less frequent in Kenya than in the Comoros and at Kilwa, and it is not found at sites along the Tanzanian coast”; this statement needs verification (cf. Chami and Kwekason 2003 for a different viewpoint).

⁸⁴ For Martin (2010: 280), however, in southern Madagascar, the appearance of this decoration is different from what can be observed in northern Madagascar, the Comoros, and East Africa.

⁸⁵ Red-slipped bowls have been unearthed at Kilepwa for Phases I and II (Fig. 4m), dated to between the twelfth and sixteenth centuries by Kirkman (1952: 178–179, 184) (Kirkman’s datings are uncertain, however; the earliest levels at Kilepwa may in fact go back to the early eleventh century).

⁸⁶ In addition to the charcoal datings (see above), Vérin (1984: 768) signals that “a C₁₄ analysis on a tridacna found in the oldest layers [the shell comes from kitchen waste] yielded a dating of 1500 ± 70,” that is the fifth or sixth century. This dating, however, cannot be trusted: “such samples should be viewed as 500 years younger” (Allibert and Vérin 1993: 38).

Besides chlorite schist and quartz from Madagascar, the Dembeni people imported ceramics from the Persian Gulf: turquoise-glazed pottery termed Sassano-Islamic, attested in East Africa, in the Comoros and Madagascar, “from c. 850 (?) to 1050,”⁸⁷ white-glazed pottery, opaque white pottery (dated to the ninth century at Susa), and enameled pottery with metallic green luster, known at Manda and at Susa (ninth–tenth century).⁸⁸ Large jars may have been used to transport date syrup, oil or bitumen (Wright 1984: 41). Sassano-Islamic pottery has been found at the Comorian sites of Mbashile, Sima, Mro Dewa, Mwali Djini, and Dembeni.

Chinese ceramics have also been excavated: green-glazed pottery termed “Dusun” (known at Sirāf from 800 onward, this pottery originated either in southern China or northern Vietnam); white pottery from the Tang period (found at Manda, and dated to between 850 and 890 at Sirāf and Suḥār); and Song pottery (tenth century). Chinese pottery of the Yue type has been discovered at Moheli (Mro Dewa) (Chanudet and Vérin 1983: 45). The dating of these imported ceramics reveals that “the Dembeni phase communities may have begun as early as AD 750” (Wright 1984: 41). For Wright, the small number of artifacts from eastern Asia during the Dembeni phase suggests that no direct contact existed with Southeast Asia or South India; these artifacts came from the Persian Gulf or ports along the East African coast: imported ceramics appear to be quite similar to those unearthed in the ports along the Swahili coast. Moreover, glass (in the form of cups, flasks, and vials) has been recovered, originating in Iraq, Persia or Egypt; also found are glass beads (similar to those found in East Africa, except for one lobed bead, a shape known at Sirāf before 800); and stone or shell beads (Allibert *et al.* 1989, 1993).

Interestingly, a few shards at Dembeni and Pamanzikele resemble Indian ceramics (Allibert, p.c.). In addition, for Majikavu, shards of pottery have been discovered that may be related to a Pakistani tradition known as early as the fourth century CE and also after the twelfth century (at Banbhore-Daybul); they are associated with Sassano-Islamic pottery and ceramics with *Arca* decoration. This Indian pottery may be connected to traditions surrounding the arrival of Wadebuli from Sind in East Africa (Allibert and Vérin 1993b: 467).

The Comorian archipelago was therefore in contact with East Africa and Madagascar, but also – to a lesser extent – with India and perhaps Southeast Asia: it appears to have been a place of meeting and interactions for merchants and sailors hailing from various shores of the Indian Ocean. According to Allibert, ironworking for export may have occurred on a large scale in the Comoros, and – probably at a later time – the archipelago became an entrepôt and “breeding place” for slaves.⁸⁹

⁸⁷ In fact, Sassano-Islamic pottery may be from an earlier date, in some regions. “It is a type of pottery of the Partho-Sasanid tradition whose production continued in later periods” (C. Allibert, p.c.). I. Glover (2002), however, does not believe in the presence of this type of pottery on the East African coast prior to the ninth century.

⁸⁸ We also note a type of pottery with a fine white paste and a cream slip showing splashes of cobalt blue (splashed tin-glazed pottery) found at Dembeni, Mwali Mdjini, and Mbashile (dated to the ninth century at Sirāf), and unglazed pottery of a type found at Sirāf (Allibert *et al.* 1989).

⁸⁹ Allibert 1996. See below. A Turkish text by Piri Reis, edited by Allibert (1988b), was written more recently; it is dated to the early sixteenth century. It describes the Comoros as a “breeding place” for slaves.

Ongoing Austronesian Travels to the Western Indian Ocean

Austronesians may have been present on the East African coast since the first millennium BCE. Austronesian arrivals are attested between the eighth and tenth centuries, not so much in archaeological data, as in Arab and Persian texts.

Archaeological Data

Although Austronesian cultures make extensive use of plants, which leave little or no trace, one might expect to obtain substantial data from archaeological research showing the settling of Southeast Asian populations along the East African coast. There is still little evidence for this Austronesian presence, however. Some East African sites have yielded a type of Arca shell-impressed pottery dated to the ninth and tenth centuries that may have links to an Indonesian culture. For the Shanga site, Horton has suggested that this type of pottery originated in the Comoros. It is present in the Comorian archipelago and in Madagascar. As mentioned previously, red-slipped pottery decorated with graphite designs is most likely not of Austronesian origin (see above).

Finds of Chinese coins dated to the eighth century at Mogadishu and Kilwa indicate the arrival in East Africa of people who were in contact with eastern Asia (Murdoch 1959: 205). Coins dated to the Tang period have also been found on Zanzibar.

The presence of chickens in the earliest levels at Shanga (eighth century) and in levels dated to the same period at Chibuene (Mozambique) and Manda may be linked to the introduction of the chicken on the east coast by Austronesians (Chami's finds on Zanzibar have been refuted; see above). Horton points out the surprising absence of the chicken at sites in the East African interior. However, in southern Africa, chicken remains dated to the eighth century CE have been found at Ndongondwane (Natal), and at Bosutswe (Botswana), dated to the ninth century (Smith 2000: 225). "MacDonald (1992) suggests that the spread of domestic fowl from the east coast to West Africa was linked with other Asiatic products such as humped zebu, domestic pig, bananas, and sugarcane" (Horton 1996: 387) (we do know that the banana tree was introduced earlier; see above). One also wonders if the presence of dogs observed at Shanga, with the occasional use of teeth in pendants, reflects a Southeast Asian influence. "Dog has not been hitherto recorded on the coast" in early times (Horton 1996: 385).

In sum, the contributions made by archaeology still disappoint. They shed no real light on the Austronesian presence in East Africa, even for the period postdating the arrival of Austronesians in Madagascar and in the Comoros. However, research may have been skewed by misconceptions about this presence. To the comments already made, it may be added that while the Austronesian migrants found nearly empty regions in Madagascar and the Comoros, others had already arrived in East Africa to find a coast more densely inhabited. Here there was no "colonization" – in spite of what has sometimes been written – just settlements by small groups, probably within or alongside well-organized communities, with whom exchanges developed. Moreover, in Madagascar, according to R. Dewar and H. Wright, archaeological data for the first millennium (see above) provide no evidence of an Austronesian culture at that time.

Chinese Chronicles between the Third and Tenth Centuries

As already noted, Chinese chronicles mention the arrival of black slaves in China from the seventh century (or even the fourth century) onward. These were mostly brought in by embassies from Srīwijaya and Java. While the arrival of black slaves is no proof of an Austronesian presence in East Africa, it does reveal the existence of trade between Africa and Southeast Asia, in which Sumatrans and Javanese took part.

Arab and Persian Texts between the Ninth and Twelfth Centuries

Between the earliest sources (*Periplus* and Ptolemy) and the first Arab accounts, we have little written information from European or Asian sources. During this period, “the Sassanid emperors controlled the Red Sea and the western Indian Ocean, and these emperors left no historical records” (Vérin 1994a: 50). Yet Sassanid pottery has been found along the East African coast (see above), revealing the existence of trade relationships with western Asia (Glover [2002], however, believes this pottery to be Sassano-Islamic).

From the ninth century onward, records kept by Arab and Persian geographers provide a major source for Indian Ocean history. Some accounts suggest that Austronesians visited the East African coast during the ninth and tenth centuries in order to acquire gold, ivory, leopard skins, aromatic resins, iron, and slaves. Al-Sīrāfi (tenth century) recounts that in 945 the “Waqwaq people” (name given to the Austronesians)⁹⁰ unsuccessfully attacked Qanbalu with a thousand boats. Qanbalu is described as an island located “in the middle of an estuary,” and protected by a “strong wall”; it may refer to a site on Pemba:

Ibn Lākīs has imparted to me some extraordinary pieces of information concerning [the Waqwaq]. In 334 [945–946], they came with a thousand small boats and attacked the town of Qanbalu. But they could not take it because the town is surrounded by a strong wall and an estuary.

Al-Sīrāfi continues:

When the Waqwaq arrived, the people [of Qanbalu] asked them why they had come there and not elsewhere. They said it was because the land had trade goods useful in their country and for China, such as ivory, tortoiseshell, panther skins and ambergris, and because they wanted to

⁹⁰ Ferrand is perhaps correct in connecting the name “Waqwaq” to the Malagasy *vahoaka*, “people, folk,” found in the royal title Andriambahoaka (Ferrand 1907: 48ff.). While the *va-* in *vahoaka*, of Bantu origin, may indicate an African influence, it may also derive from *waq*. B. Domenichini-Ramiaramanana and J.-P. Domenichini have suggested that Andriambahoaka can be translated as “prince of the mouth [of the river]” (the first Malagasy probably settled at the mouths of rivers); however, *hoaka* (“hole, passage”) probably never had the meaning of “mouth [of a river].” The linguistic connection of *hoaka* with PMP **baqbaq* (“mouth”) suggested by these authors (1983: 11) is not acceptable. *Hoaka* can derive only from either **kuqak* or **kubak*. A link with Waq, the name of the celestial divinity of the Gallas, is uncertain. Dick-Read (2005: 218) relates Waqwaq to the name given to outrigger canoes of the Pacific, *vaka*; the Malay term, however, is *wangka*, which does not refer specifically to outrigger canoes, but rather to junks. Mahdi suggests that Waqwaq and *vahoaka* derive from Malay *awak-awak*, “people, crew” (Mahdi 1994b: 480 n.169).

obtain Zanj, for they were strong and easily endured slavery. They said their voyage had lasted a year. They had pillaged some islands six days away [the Comoros?], and then several villages and towns belonging to Sofala in the Land of the Zanj, and other places that nobody knows. If these people spoke the truth and had come from a distance of one year's sailing, this would confirm what Ibn Lākīs said of the islands of the Waqwaq: that they are situated opposite China. (Devic 1975 [1883]: 174–175; Sauvaget 1954: 301; Freeman-Grenville 1980: 103)

The attack on Qanbalū – then a place of significance on the Swahili coast – may have been motivated by trade competition with the Arabo-Persians in this area. While the Austronesians failed to take Qanbalū, they may have been more successful at Unguja Ukuu, which was abandoned around the turn of the tenth and eleventh centuries (Juma 2004). For M. Wood (2005), these Austronesian arrivals may be linked to the end of the first phase of occupation at Chibuene (the settlement went into decline after 1000) and to the presence of a new type of glass beads on the southeastern African coast.

Interestingly, glass with a composition similar to assemblages from Kota Cina (eleventh–fourteenth century) has been found at Mtwapa (Kenya) (Dusubieux and Kusimba 2012).

Al-Sīrafi recounts another anecdote, quoted in the encyclopedia of al-Umari (who died in 1349): “After six or seven months at Sribuza, it happened that the king [of Sribuza = Srīwijaya] *went to make war on the rulers of the Zanj/Zabaj country*” (in 941) (Ducène 2015). While Zanj/Zabaj can be interpreted either as the East African coast or as Java, an older text written by al-Jāhiz (ninth century), referring to East Africa, “speaks of naval attacks organized by the ruler of az-Zābaḡ (Srīwijaya), who was able to send a thousand boats (*sunbuq*) in punitive expedition.”⁹¹ Ibn al-Faqīh (tenth century) establishes a distinction between the Waqwaq “of China,” and the Waqwaq “of Yemen” – understood by Ferrand as “the Waqwaq of the south”; this may possibly correspond to Indonesia, on the one hand, and Madagascar (and probably part of the East African coast), on the other (Ferrand 1907: 454–456; Vérin 1990: 38–39). Al-Sīrafi tells of seven young male Waqwaq slaves who fled from Aden to Zayla (Ducène 2015). Various Arab geographers locate the Waqwaq Islands in the western Indian Ocean. According to Ya‘qūbī: “The islands of Wāq-Wāq are located in the Larwi Sea which washes upon the west coast of India and countries inhabited by the Zenj” (Ferrand 1919). The Chinese chronicles of the twelfth and thirteenth centuries (both the *Lingwaidaida* by Zhou Qufei and *Zhufanzhi* by Zhao Rugua), as well, show an

⁹¹ According to al-Jāhiz, the Arabs do not know the true Zang: “You see only the captives who come from the coasts of Qanbalu . . . our dregs and our slaves . . . As the Zang are of two main lines of descent, Qanbalu and Langūya . . . You have yet to see the true Zang, since you only know the enslaved kind brought from the shores of Qanbalu . . . You have yet to see a member of the Langūya kind, either from the coast or from the interior” (after G. and J. Ducatez, in Devisse 1990a: 406–407). Devisse’s representation of the letter *jim* (ğ), which is otherwise written as *j* in this book, has been maintained here. Trimmingham (1975: 134 n. 54) has derived “Lanjūya” from “Unguja” (Zanzibar). The text develops a distinction between the coast and the interior; while this distinction would apply more aptly to Madagascar, this hypothesis is not supported by linguistic data: it appears to be difficult to connect Lanjūya and Layrana linguistically (Layrana is a town mentioned in Qumr [Madagascar] by Ibn Sa‘īd during the thirteenth century) (see below). Mentioning the “Maharaja,” “king of the islands, perfumes and aromatics,” Mas‘ūdī states that “he also owns the islands of Java (az-Zābaj) and Rāmni [Sumatra]” (1962, 1: 140 [para. 378]).

awareness of the existence of two Kunlun (K'uen-luen): one in the east (the name refers collectively to ancient Cambodia, Champa, the Thai–Malay peninsula, and the islands of western Indonesia), and one *cengki* (or Kunlun *sengki* or K'uen-luen ts'eng-k'i = Qumr Zangi), in the west, where one can find elephant tusks, rhino horns, the *p'eng* bird (in a territory next to Qumr Zangi) and black people who are captured to be sold as slaves (Ferrand 1919: 253). The *p'eng* bird seems to be the *rokh* of the Arabs, which is the giant ostrich *Aepyornis* from Madagascar (see below). It was said that a quill from the *peng* (a bamboo, in fact) could be used as a water container. It is likely that the Chinese chroniclers were in contact with Arab and Persian merchants. Al-Sirāfi mentions the use of a quill from a bird's feather as a water container (Devic 1878: 54, 84–85); Ibn Sa'īd identifies this bird as the *rokh* from Qumr (here we can see the old legends coming into play, as in the case of the *waqwaq* tree: the bamboo plant had in fact already been described by Ibn Khurdādhbeh, 844–848). The existence in the Malagasy language of the two homonyms *volo*, referring to a feather (cf. Maanyan *wulu*) and to the bamboo plant (cf. Malay *buloh*) respectively, certainly led to this association of bamboo with the *Aepyornis*' feather.⁹² C. Allibert (1992) points out that the image of the *rokh* bird blends three elements: Arab legends surrounding the *Aepyornis*, the Indian god Garuda, and the mythical *simurgh* bird of the Persians.

Contacts did exist between Madagascar and the Muslim world during the ninth century, as shown by Ibn Rusteh: “a merchant brought back eggs similar to ostrich eggs from the two seas which are beyond the country of Kūšān [of the Zanj]”: these were probably eggs of *Aepyornis* (Ibn Rusteh, 100, quoted by Miquel, 1975, 11: 178). Al-Sirāfi mentions giant birds “at Sofala of the Zenj”:

Many shipowners have told me they had heard that in Sofala of the Zenj there is a bird which seizes a beast with its beak or its claws, takes it in the air, and drops it from high above the ground, in order to kill it and break it, and then the bird falls upon it and devours it . . . In the same country of the Zinj, there is, it is said, a bird which throws itself on big turtles, takes them in the air and drops them on some rock on which they break. (Devic 1878: 56).

These birds and tortoises certainly refer to the *Aepyornis* and to the giant tortoises of Madagascar.

The Waqwaq are “islands”;⁹³ however, Mas'ūdī speaks of a Waqwaq country beyond Sofala (Sofala does not yet refer to a town, but to the Mozambican coast):⁹⁴

These sailors [sailors from 'Oman and the tribe of Azd] go on the sea of ez-Zanj as far as the island of Qanbalū . . . and the land of Sofāla and al-Wāqwāq which is on the extremity of the country of the Zanj and the low countries thereabout. The merchants of Sirāf are also in the habit of sailing on this sea. I have made a voyage on it from Sohār, which is the capital of 'Oman, with a crew of Sirāfians . . . The limits of the sea of the Zanj are the land of Sofāla and

⁹² Allibert 1992. The identification of the *rokh* bird with the *Aepyornis* has already been put forward by the Italian naturalist G. Bianconi in 1874 (see Devic 1878: 170 n. 20). For the *peng* feather and the bamboo, see Ferrand 1907: 551.

⁹³ In Arabo-Persian texts, in fact, the term “island” also refers to coastal regions.

⁹⁴ Al-Bīrūnī appears to be the first author who mentions Sofala as a particular location.

al-Wāqwāq, which produces gold and many other wonderful things. (Mas'ūdī 1841: 162, 1962, 1: 94 [para. 246], and 1965, 11: 322–323 [para. 847]).

Idrīsī (twelfth century), a compiler who used Mas'ūdī's work and other unknown sources, indicates in his *Diversion for the Man Longing to Travel to Far-Off Places* written for the Norman King Roger II of Sicily, that “beyond the territory of Sofāla lies that of al-Wāq-Wāq [= Mozambique].” He mentions the village of Daḡarḡa (or Daḡdaḡa), inhabited by “Blacks of ghastly face, and misshapen . . . Their country is close to the islands of al-Wāq-wāq.” As Ferrand has pointed out, the Arab authors therefore distinguish between a southern Waqwaq, on the Mozambican coast, which corresponds to the country of the Makwa, and the island of Madagascar (Ferrand 1907: 467–468, 480, and July–August 1919: 63). It is possible that this unity of names reflects the perception of a common culture (however, Idrīsī is vague on this point); this may reveal the presence of Austronesians on the African coast. Ibn Ḥawqal (tenth century) notes the existence on Zanzibar of “a race of white peoples who bring from other places articles of food, and clothing” (Oliver and Mathew 1963: 108), and al-Sīrāfi mentions the capture of Sofala coast villages by “WaqWaq people.” These Austronesians who settled along the Mozambican coast may have left their mark on the continental interior, and on “African” arrivals in Madagascar around the tenth century (see below).

Arab and Persian texts are more or less explicit about the routes the Austronesians followed through the Indian Ocean. Various sources indicate an Austronesian presence in India, which may have yielded migrations westward and southwestward. Balāduri (ninth century) and al-Ṭabarī write that the Sayābiga people (sing. Saybagī, from Sābag = Zābag, “< Javaka” via a Tamil intermediary Shāvaka) were living in Sind prior to the Islamic period (Shavakam refers to Sumatra and Java in ancient Tamil poems; see Kanakasabhai Pillai 1904). Taken as prisoners during a Persian invasion, the Sayābiga were recruited as gatekeepers, soldiers, and sailors in the Persian Gulf. Under the reign of the caliph Abū Bakr (632–634), the Sayābiga formed a garrison on Bahrain, and in 656–7, they served as guardians of the state treasury at Basra. In 775, Sayābiga took part in a naval expedition that departed from Basra to attack the coasts of northwestern India (Ferrand 1924b: 208–209).

The Austronesian presence in India and in the Persian Gulf seems to support the hypothesis – put forward by Hornell – of a route to Africa via the “Sabeian lane” (Hornell 1934: 315). In fact, a route from India to Africa appears more likely. The significance of the ancient Indian ports of Sōmanāth and Kulam, and the activities of Srīwijaya on Sri Lanka and on the Coromandel coast have already been noted (see above).

While the northern Indian Ocean may have been one route toward Africa and Madagascar for the Austronesians, a more direct route through the Maldives and the Chagos emerges from descriptions left by various authors. Al-Sīrāfi's book thus expresses a continuity between the Comoros and Madagascar on the one side, and the Chagos on the other, by describing “the islands of the Waqwaq” as “close to the last of the Dibayat-ad-Dum Islands” (quoted by Ferrand 1913/14: 586 and Vérin 1972: 56). The mention of an attack on Qanbalū by Waqwaq people “from a place one year's sail away” – India here is not mentioned – in the same book appears to refer to this southern route.

Al-Bīrūnī, c. 1030, also writes:

The islands in the eastern part of the ocean, nearer China than India, are the islands of Zabaj, called by the Hindus Suwarn-dyb [Suvarna-dvipa, Sumatra], that is to say “the islands of gold.” The islands in the western Indian Ocean are the islands of the Zanj, and those in the middle of the ocean are the islands Ramm, the islands Diva [Laccadive Islands, Maldives] to which the islands of Qomayr also belong. The island of al-Wāqwāq is part of the islands of Qomayr. The people of Qomayr have an almost white complexion. They practice the religion of the Hindus and pierce their ears. One finds people of black complexion among the Wāqwāq. People go there to acquire black ebony wood, whereas the woods called *mulammaʿ* and *ṣauḥat* and yellow sandalwood are brought from the country of the Zanj. (translated from Ferrand 1907: 465–466)

One notes here the identities of al-Waqwaq and Qomayr [Madagascar] and the confusion between various Qomayr (Khmer country and Madagascar), an issue to which we will return further on. “On the *Quadrans habitabilis* of al-Bīrūnī,” Ferrand notes, “the African coast is oriented west-east, following Ptolemaic theory. The islands of Qomayr (the map shows three islands bearing this name) and Waqwaq are located close to the African coast, below an island called Zabaj Surendib = Suwarn-dyb that separate them from the Sea of Sanf [Champa].”⁹⁵ Ferrand appears to be identifying the island “Zabaj-Surendib” with Sumatra, and not with Sri Lanka (Sarandib). The correlation of the islands of Qumayr (here possibly Madagascar and the Comoros) with the Diva Islands postulated by al-Bīrūnī may express some knowledge of the route – via the Maldives or the Chagos – followed by the Austronesians toward Africa and Madagascar.

Idrīsī also writes about the Maldives: “Further [south] is the island of Qumr . . . Prolonging these Dives [islands], seven days sail away, is the island of Qumr” (Viré 1984: 27, 29).

Arab and Persian authors appear to have some knowledge of a dangerous route from Java to East Africa, south of the Equator. The Persian Ibn Rusteh (c. 903), “after describing the regular route to Java across the Bay of Bengal and the Strait of Melaka, states that ‘in passing by Zabaj [Java/Sumatra] to reach Zanj [East Africa], one must pass through the regions of Darkness” (Manguin 2011: 273; cf. Tibbets 1979: 31). Passages of the Bugis epic *The Galigo* (fourteenth century), describing the hero’s voyage toward the Indian Ocean, also signal the dangers of an ocean whose waters run southward, with gigantic swirls and sea monsters (Pelras 1996, quoted by Manguin 2011: 274). In one of the islands visited by the hero stands the cosmic tree *pao jengki*, “mango of the Zenj” (Pelras and Lombard 1981: 515).

Does the Zabaj of Ibn Rusteh really refer to Java? Tibbetts (1979: 87) notes that Ibn Rusteh is the first to locate the Zabaj Islands in the western Indian Ocean, something that Idrīsī would later repeat. Ibn Rusteh mentions a “Zabag” which seems to correspond either to the Comoros or Madagascar: “When the navigator sets sail in the gulf of Aden, the first land he reaches is the island called Barbar, that is inhabited by a race

⁹⁵ Ferrand 1907: 502–503. The association of “Zabaj” and “Zanj,” in a passage by al-Bīrūnī (see Horton and Middleton 2000: 101) dealing with modes of trade exchange between merchants of the Indian Ocean and natives, may indicate that Zabaj is also located in the vicinity of the East African coast (as are the Comoros of Idrīsī, called “Zabaj” by this author; see below).

of Zanj who are neighbors to the country of the Blacks. It is in this direction that the Zanj country and the Jawaga [Zavaga] are located” (Ferrand 1913–1914: 68–69).⁹⁶

A passage in Idrīsī has often been used to support the thesis of Indonesian voyages from Sumatra or Java toward Africa. He mentions journeys by the inhabitants of the Zabad or Zabag Islands to the Zanj country; trade between these locales is facilitated by the fact that “their languages are mutually intelligible.” Quoting this passage, P. Vérin connects the “Zabad” Islands with Sumatra.⁹⁷ Based on a translation from Idrīsī published by F. Viré, and as C. Radimilahy previously (1988), J.-C. Hébert interprets this passage differently; he emphasizes the fact that Idrīsī names two Comorian islands (Anjouan and Angazija) among the islands of the “Jāvaga” (*ḡazā’ir al-Zābaḡ*);⁹⁸ Idrīsī also specifies the distance from these islands to the continent as “a one-journey sail”:

Among these islands of Jāvaga [Zabag] is the island of Anjouana (*ḡazīrat al-Anḡuna*) and the center uniting the population of this island is called al-Angazija in the language of the Jāvaga people . . . Between these two islands and the village of *al-Bānis* on the coast of the Zeng country, the distance is of one journey sail. (Viré 1984: 21)⁹⁹

“Zabaḡ” thus refers to the Comoros, and not to Sumatra or Madagascar. Idrīsī is the first among Arab geographers to use the name “Qumr” for Madagascar, a term written on his maps (see below). At this time, the Red Island begins to be progressively connected to the Arabo-Swahili networks.

⁹⁶ The fact that the Arabic written forms for “Zanj” and “Zabaj” are so similar has led to greater confusion in interpreting texts.

⁹⁷ Vérin 1990: 40. O. C. Dahl (1991: 89) and, more recently, J. Wisseman Christie (1999: 229) make the same mistake, believing that Javanese people came to acquire iron on the Sofala coast.

⁹⁸ The reading of this Arabic term has varied considerably. It has been corrected to Zabag by Viré and other authors. Viré indicates that this word should be “pronounced ‘Zābag’ which is the arabicized form of the Malay ‘Jāvaga’ corresponding to the kingdom of Śrīvijaya whose center was Palembang. All the other readings are misspellings due to ignorant scribes” (Viré 1984: 20 n. 2). Ferrand had already noted Zabag (1919: 5–6).

⁹⁹ What Idrīsī calls a “journey” (*maḡrān*) “corresponds to one *zām*, that is to say, the distance traveled in one day, approximately 100 nautical miles” (Viré 1984: 20 n. 2). Ferrand’s translation was erroneous here: “Among the islands of Jawaga is Andjuba, whose principal town is called Unguja in the language of Zanzibar, and whose people, although mixed, are actually mostly Muslims” (translated from Ferrand by Freeman-Grenville 1962a: 19).

Madagascar (Seventh–Eleventh Century): Early Cultural Hybridization

While the world-system was entering a phase of decline during the ninth and tenth centuries, a first Arabo-Swahili advance occurred toward the Comoros and Madagascar, setting up networks in what M. Horton has called the “Swahili corridor.” This push would intensify from the early eleventh century onward. During what is known as the Comorian Dembeni phase, Madagascar underwent changes linked to the arrivals of populations from the East African coast and the Comoros. These were reflected in major ecological changes. While the Austronesians, skilled in combining rice and tuber farming in humid tropical ecosystems, were developing the island’s wettest regions (its northern and eastern coasts), and soon afterwards part of the Highlands, some Bantu-speaking migrants, at an early stage, were occupying other ecosystems, by clearing land in drier regions of the western Malagasy coast. These migrants brought with them African species suited to the conditions in these zones: sorghum (*Sorghum bicolor*) and two legumes, the cowpea (*Vigna unguiculata* (L.) Wal.) and the Bambara pea (*Vigna subterranea* (L.) Verdc.). They also developed extensive animal husbandry: the zebu seems to have been introduced around the ninth century in the northwest, which had repercussions on the plant cover and a subfossil fauna (Burney *et al.* 2003: 10802; Burney *et al.* 2004: 33). African animals appear to have been brought from Africa at this time, for example the *Kinixys belliana* turtle (Raselimanana and Vences 2003; Walsh 2007) and the guinea fowl (*Numida meleagris*). In northern Madagascar, Bantus and Arabo-Persians mixed with the Austronesians who had already settled there. During this early phase of hybridization, demographic growth led to the appearance of various settlements along the coasts and later inland, despite geographical obstacles such as the rain forest of the eastern coast and the immensity of the island itself. Some rivers of the eastern coast and – to a greater extent – those of the northwestern coast (Sofia, Mahajamba, and Betsibòka) provided routes of entry toward the Highlands. Moreover, coastal navigation enabled the first settlers to discover new regions. The first known settlements from this early period were located along the northwestern coast (Mahilaka) and northeastern coast (Irodo). By the end of the first millennium, there were signs of human activity in all regions, including the Highlands, which showed a decline in woody vegetation at this time (Burney 1987a; Burney *et al.* 2004: 35).¹

¹ H. Deschamps has placed too much emphasis, not only on the country’s great size and the obstacles to population this presented, but also on the island’s remoteness: “The consequences of the vastness of this massive Malagasy continent would influence the country’s entire history . . . the hard task of filling the land

Although the first Austronesian migrants probably brought concepts of hierarchized political organizations with them, the implementation of these concepts in Madagascar was hindered by the communities' small size and relative isolation. With the exception of Mahilaka, which can be viewed as a city-state (although the city truly developed only during the thirteenth and fourteenth centuries), the smaller size of the other settlements certainly did not allow the setting up of a complex political apparatus (Vérin 1992).

Archaeological Coastal Sites

The ninth and tenth centuries saw the appearance of settlements in various regions of the island. Some of these sites have yielded imported pottery.

Irodo (northeastern coast) is one the earliest settlements known in Madagascar (its earliest levels go back to the ninth century, but its main occupation is dated between the twelfth and fourteenth centuries).² As was the case for East African sites, Irodo and Lanivato, further north, were established behind protective islands, near the mouths of rivers. These fishing villages have yielded fragments of chlorite schist (often with drilled holes: these fragments must have been used as weights for fishing nets), iron slag, and ceramics with *Arca* imprints revealing links with Majikavu and Koungou (Mayotte). Irodo contained a few samples of Asian ceramics: one shard of Sassano-Islamic pottery, a few shards of late sgraffiato and celadons. Local pottery shows a pattern of wavy lines, and red slip (Dewar and Wright 1993: 436). N. Martin (2010: 292) suggests a link between the Austronesian migrations and this decoration of wavy lines, which is also observed at Kilwa (where it is rather uncommon) (Period I, Chittick 1974: 336, fig. 94.g, and Period II, shard M16: 333). Besides pottery of the Majikavu type, other evidence of contacts with the Comoros can be seen at this time for various regions in northern Madagascar. Excavations have yielded silver and brass chains and bracelets. At Irodo, shell spoons have been found; they appear to be similar to spoons excavated at Mwali Mdjini (Moheli) belonging to a later period (Chanudet 1991: 95). Eggs of *Aepyornis* have been discovered (Tafiampatsa) and dated 1190 ± 90 BP (ninth century).³ These eggs may have been exported, since the Persian Ibn Rusteh (ninth century) mentions that a merchant brought “eggs similar to those of the ostrich” from a country beyond the seas of the Zanj (see above).

On the northwestern coast, the trading settlement of Mahilaka appeared during the ninth century (Radimilahy 1998). Mahilaka's maximum extension, however, occurred

with people . . . ; the diversity of climate and relief, along with the country's vast empty spaces, all contributed to the individualization of each group of humans. Madagascar's remoteness – an island at the far edge of the world – also helped protect it and, to a great extent, helped it to maintain its original unity” (Deschamps 1960: 35).

² Battistini and Vérin 1966. Domenichini-Ramiamanana (1990: 737) gives the following radiocarbon datings: 1200 ± 140 BP [Gak 380], 1090 ± 90 BP [Gak 692], and 980 ± 100 BP [Gak 350b], “a maximum range extending from +610 to +1070.” An eighth-century dating may well be possible, but for Dewar and Wright (1993: 436), the radiocarbon datings at Irodo give rise to problems of interpretation (Gak 692, notably, was taken from a shell).

³ R. Dewar notes that the dating obtained at Irodo-Antanimenabe (1200 ± 90 BP) [Gak 380] gives grounds for concern, due to unreliable connections made with archaeological sites nearby (1984: 583).

during the thirteenth and fourteenth centuries. Local ceramics have been excavated there (including Arca-impressed pottery and red-slipped bowls, known at other sites in northern Madagascar and the Comoros from the same period). A decoration showing zigzag lines is common on Mayotte; it has also been found at Mbeni (Grande Comore), Unguja Ukuu (Zanzibar), Kilwa (*Early Kitchen Ware*, period I), Ungwana, Manda, and – for a later period – at Gedi (twelfth–thirteenth centuries) (Martin 2010: 178–180, and fig. 11). The early levels at Mahilaka have yielded ceramics from the Persian Gulf (including a type of white-glazed ware with luster decoration found in East Africa, where it has been dated between the ninth and the eleventh centuries, and various types of sgraffiato ware, dated as early as the tenth century at Dembeni), as well as ceramics from eastern Asia (such as white-glazed Chinese Song pottery dated to the tenth century, and later celadons) (Radimilahy 1998: 178–179, 209). Glass beads were already present in the earliest levels.

Islam probably appeared at an early stage at Mahilaka. While the center of the town has yielded no tenrec remains, tenrec bones have been retrieved from the site's periphery, revealing the consumption of these animals. We may conclude that an Islamic influence was more strongly felt in the site's center during the tenth century.

The oldest layers show that Mahilaka's inhabitants worked iron, as well as chlorite schist, and quartz, imported from the northeastern part of the island. Rice was the staple food, and was probably exported. Cattle bones have also been recovered in the first layer.

From the outset, the settlement at Mahilaka was clearly involved in Indian Ocean trade, revealing contacts with the Comoros and the African coast, as well as with India and Southeast Asia. The town surely participated in relations between Sofala, the Zabag Islands (Comoros), and India, as later signaled by Idrīsī, who writes of visits by “the people from Qumr” at Justa on the Mozambican coast. Two types of cattle have been found.⁴ The earliest evidence for cattle introduction comes from the Amparihibe site, on Nosy Be, where an increase in spores of the dung fungus *Sporormiella* – thought to be evidence for livestock proliferation – can be seen by the ninth century (it has been dated between 779 and 1020 CE) as well as a charcoal increase in sediments. There are clues to livestock in the Highlands two centuries later at Lake Kavitaha (Burney *et al.* 2003: 10802–10803; Burney *et al.* 2004: 35). L. Rakotozafy writes that two populations of migrants, the first of Southeast Asian origin, the other from East Africa contributed to the formation of Mahilaka.⁵

Mahilaka also had links with satellite villages and neighboring islands such as Nosy Be, where various sites have yielded red-slipped ware with a graphite decoration, showing black and white motifs that have also been found in Androy (southern

⁴ While Rakotozafy (1996) has suggested an Asian origin, this remains unconfirmed. The presence of two types of cattle has been frequently observed at East African sites. E. A. Voigt (1983: 132) thus points out that sites in Zambia and Zimbabwe show the presence of both humpless cattle and zebu-type cattle by the end of the first millennium CE. The earliest evidence for the presence of zebu in the southern part of Africa comes from Kumajulo (Zambia), where zebu figurines have been excavated (fourth through sixth centuries CE).

⁵ Rakotozafy 1996. Cf. Radimilahy 1998: 210. G. Shepherd (1982) suggests that Mahilaka was founded by migrants from Southeast Asia.

Madagascar), at the Andranosoa site (Radimilahy 1998: 71). A type of red-slipped ware is also characteristic of the Anosy region in the Maliovola phase (eleventh–twelfth century). At Madirokely, the largest site on Nosy Be at the time (3 hectares), fragments of chlorite schist and shards of sgraffiato have been unearthed. Sgraffiato ceramic has also been excavated at other sites on Nosy Be (Radimilahy 1998).

The Mahilaka settlement prefigures the future towns of the *antalaotse* or “people of the sea.” The term *antalaotse* refers to a life style, not to an “ethnicity.”⁶ It is difficult to know who brought in Chinese ceramics (Tang ceramics from the eighth–tenth century, and Song ware from the tenth–thirteenth century) found in the Comoros and Madagascar. It is likely, however, that Africans and Arabo-Persians played a key role, along with migrants from South Asia. The Austronesians took part in the diffusion of Chinese ceramics throughout the Indian Ocean, from the eighth century onward. However, the Chinese pottery called “Dusun,” found in abundance in Sriwijaya, has not been retrieved (or recognized?) at the Malagasy sites (although it has indeed been found on Mayotte, at the Dembeni site) (see above, Allibert 1998).

South of Mahilaka, no site is dated prior to the eleventh century, but people from Mayotte (perhaps Austronesians) went and caught turtles in Baly Bay by the ninth century (Allibert).

Apart from Irodo, no site dated to the period between the eighth and tenth centuries has been found in northeastern Madagascar;⁷ however, at this time, chlorite schist was certainly being worked: chlorite-schist pots are finds characteristic of this region. Produced locally, they were exported to the Comoros and East Africa as early as the ninth century. P. Vérin has pointed out that “chlorite-schist pots were present in all the sites of the East African coast and the Comoros from the ninth through the fifteenth centuries, and it has been surmised that Madagascar was the primary supplier for this western Indian Ocean” (in fact, chlorite schist was not present in all the East African sites, only in some sites such as Manda, Unguja Ukuu, Kilwa, and Chibuene). A series of quarry sites has been discovered in northeastern Madagascar.⁸ P. Vérin has suggested that tripod pots “imitated the bronze Chinese Tang pots that were carried to India and western Asia.”⁹ It may be true that chlorite-schist work in Madagascar was initiated by people from the Persian Gulf (Vérin signals an ancient trade in chlorite schist – as early as the sixth century BCE – in Pakistan and northwestern India and in the Persian Gulf).¹⁰ These purported connections do not necessarily contradict Allibert’s hypothesis of an ancient Austronesian presence in the Persian Gulf; these Austronesians, according to Allibert, may have sailed to the trading settlements of

⁶ The name *antalaotse* is not attested until much later in Madagascar. It appears for the first time in the account of the pirate Cornelius’s life (c. 1703): “Tyloute or Antylouts, who are *métis* of Arabs and Vaujimbos [Vazimba]” (Grandidier 1908: 158 n. 2).

⁷ Most of the Vohemary site goes back to the thirteenth century; however, researchers have recently provided a ninth-century date.

⁸ Vérin 1975a: 747. Arabic signs (letters), perhaps marks made by stonecutters, have been tentatively identified on blocks at Amboaimohehy (Vérin 1975a: 754).

⁹ Vérin 1990: 61. Van der Sleen (1960: 191) also writes: “They were probably sacred vessels such as the vessels used by the Chinese to provide the dead with food for the great journey. In China, these vessels were usually made of bronze.”

¹⁰ Vérin 1972: 39. The manufacture of steatite vessels in Arabia and Persia happened in fact much earlier.

northern Madagascar. Chlorite-schist work may also reflect an “Indian” influence in East Africa, where traditions mention the arrival of Wadebuli by the late first millennium. Excavations at Daybul have revealed the presence of sgraffiato, and of chlorite schist similar to that found at Kilwa and in northern Madagascar (Vérin 1986: 54).¹¹ Without providing convincing evidence, G. Shepherd states that by the ninth century, Sumatrans linked to Srīwijaya who had settled in India began producing the tripod chlorite schist ware found in Madagascar (Shepherd 1982: 137). J.-C. Hébert notes that the Comorian vessels do not show the three feet of the Malagasy pots.¹² Nor were the pots found in the Mananjary region fitted with feet (Vérin 1975a: 915). Madagascar may have exported primarily raw material, which was carved following its arrival (M. Horton has suggested this for Pemba [1996: 354]). Lastly, Chittick connects the first finds of chlorite schist at Kilwa and Manda to South Arabian influences.

In the Bay of Antongil, in excavations conducted on Nosy Mangabe Island, the second-earliest level has yielded a dating of 1250 ± 60 BP, which corresponds to the late eighth or early ninth century (Dewar and Wright 1993: 429–430; Wright 1993). Iron slag, chlorite schist, and a coarse local pottery sometimes decorated with *Arca* imprints are all dated to this period. White-glazed ware from western Asia, well known at Comorian and East African sites dated to the ninth and tenth centuries, has also been retrieved. The study of sediments reveals changes in the plant cover, probably due to swidden cultivation from the eighth century onward at least. The island was settled until the eighteenth century.

South of the Bay of Antongil, excavations in the Mananara River valley in 1986 and 1990 led to the discovery of sites of settlements for the phase called “Sandrakatsy” (eighth through twelfth centuries). The site at Sandrakatsy was occupied as early as the eighth century: one pit has yielded two C₁₄ datings : 1140 ± 60 BP and 1240 ± 50 BP (Wright and Fanony 1992: 32). Other small sites in the valley and a coastal village belong to the same period. Excavations have revealed the crafting of chlorite-schist basins or vessels and the same type of ceramic as on Nosy Mangabe. The various settlements contain coarse pottery (spherical jars) of a type found elsewhere on the island, dated to between the ninth and thirteenth centuries (one jar was decorated with *Arca* imprints), and a finer type of pottery, including red-slipped bowls also known on ancient sites in southern Madagascar. Iron slag, as well as imported beads made of carnelian, glass or metal, have also been recovered. According to R. Dewar and H. Wright, the small size of the villages seems to indicate low population size and low social complexity (1993: 430, 437).

Sandrakatsy has yielded a curious discovery: two gold beads (of a cubic shape) and a silver bead; H. Wright and F. Fanony have this to say with regard to these beads: “The only objects made of precious metals that appear to be similar come from

¹¹ Vérin notes that the appearance of sgraffiato at Kilwa appears to coincide with the arrival of Wadebuli. It is also possible that the name “Shirazi” for the Kilwa dynasty signifies true trade links with the Persian Gulf.

¹² J.-C. Hébert, p.c. Hébert has found and renovated a large chlorite-schist basin discovered at Sima (Anjouan), that certainly came from northeastern Madagascar. “It was probably used as a basin for ablutions at a mosque, but this mosque has not been excavated.” “This basin, previously broken, was broken again and now has only one foot left” (*ibid.*). Steatite vessels with feet have been found at Kilwa and Manda by N. Chittick (1974, II: 412–413).

Mindanao in the Philippines, where they are dated to between the tenth and fourteenth centuries AD” (Wright and Fanony 1992: 27).

Research recently conducted in the Fenoarivo region has led to the discovery of three small sites belonging to the Sandrakatsy phase. They contain local pottery and chlorite schist (Wright *et al.* 2011).

The only ancient discoveries on the coast further south – regions where little prospecting occurred¹³ – are located in Anosy, in the extreme Southeast, where the Efaho River valley shows occupation from the ninth century onward, with no imported ceramics in its earliest phase, but including chlorite schist. A sampling in a hearth at the Maliovola site, which has lent its name to the first cultural phase identified, has provided an earlier-than-expected dating of between 780 and 980 (1140 ± 80 BP).¹⁴ The Maliovola phase, however, appears to be dated mainly between the eleventh and thirteenth centuries, although its spherical jars and red-slipped bowls are similar to those found at Sandrakatsy, in northeastern Madagascar (Wright and Rakotoarisoa 1997: 316). Moreover, Triangular Incised Ware has been excavated at the mouth of the Menarandra valley (Mahafaly country), at the site of Enijo (ninth–thirteenth century) (Parker Pearson 2010). This is the only discovery of this type of pottery in Madagascar; it reveals direct connections between the East African coast and southern Madagascar.

First Signs of Human Presence in the Highlands

In the Highlands, the mosaic of savannahs and forests which had established themselves during the Holocene changed approximately 1,300 years ago: in the Itasy region and perhaps slightly earlier in the Vakinankaratra, sediments reveal an increase in grass pollen, a decrease in tree pollen and high charcoal values, probably due to a human presence, coinciding with a period of relative drought and therefore with a more fragile forest-savannah mosaic.¹⁵ Kavitaha Lake (near Itasy Lake) shows a temporary increase in sediments at that time. At Lake Tritrivakely (Vakinankaratra, 1,000 kilometers south of Antananarivo), research into pollens has shown the presence of Indian hemp dated to the eighth century, just prior to an increase in the charcoal content of sediments, around 750 CE, which is probably due to human activity (Burney 1987c: 368, 374). As already noted, Indian hemp pollen was present by 500 CE (see Volume 1). The castor plant, originating in Africa, but not necessarily introduced from Africa, was present in sediments dated to 1000 CE at Lake Kavitaha.

¹³ Surveys done by Pannetier (in 1971) and Griffin (in 1995, 1997) at Ambohabe (at the mouth of the Matatàña River) have yielded no assemblage dated to the period between the seventh and tenth centuries (see Pannetier 1974; Griffin 2009).

¹⁴ Wright *et al.* 1993: 69. Radiocarbon dating in the earliest levels at Tsiandrora has provided a dating between 900 and 1260. Rakotoarisoa has retained a dating between the eleventh and thirteenth centuries for the Maliovola phase (1998: 57).

¹⁵ Burney 1987a: 130–143; Dewar and Burney 1994: 82. Research done by D. Burney has invalidated the existence of an ancient dense and continuous forest in the Highlands, previously suggested by Perrier de la Bathie.

PART II

Globalization during the Song and Mongol Periods (Tenth–Fourteenth Century), and the Downturn of the Fourteenth Century

Introduction

Through the sea should you understand the world.
Par la mer dois-tu entendre le monde.
(address of the hermit to Lancelot in *The History of the Holy Grail*, 1235)

In the wind of the sky the sea traveler
For his beloved, far away, is sailing,
A cloud-covered bird,
He has gone, leaving no trace, no mark
(Li Bo, eighth century,
quoted by de la Vaissière 2002: 7)

The Globalization of the Tenth and Eleventh Centuries

Along with the creation of a Muslim Empire, the growth of the Chinese economy under the Tang in an outward-looking empire gave impetus to trade throughout the Asian continent and the Indian Ocean, triggering its progressive integration within an Eurasian world-system in which Africa had a part. China would once again act as a locomotive, pulling the carriages of the world-system train much more vigorously than it had before,¹ under the Song dynasty, from the late tenth to the thirteenth century. Generally speaking, expansion in China simultaneously involved agriculture, cities, industry, transportation, trade, and culture, during a period which has often been compared – from an Eurocentric point of view – to the Italian Renaissance. The Song state set up an efficient administration, composed of officials recruited through competitive examinations. Agriculture progressed both in the margins of the empire, thanks to the settling of military colonies, and in the south, with the development of intensive rice cultivation, fostered by higher temperatures and precipitation,² and inflows of populations from the north. The Chinese population

¹ Frank 1998: 277, describing a period after the fifteenth century; in fact this image has more relevance for earlier periods (for the second and third cycles, and perhaps for the first cycle). On Chinese preeminence in the world-system after 1000 CE, see McNeill, 1998a: 219–220.

² The same climate change underpins the development of South India and the agrarian states of Southeast Asia, both experiencing spectacular demographic growth between the tenth and thirteenth centuries (Lieberman 2003: 92, 108). Europe also benefited from favorable climatic conditions, as did Egypt (this was linked to high Nile flooding) (Lieberman 2003: 104). Butzer (1995: 138) also signals a wetter interval in western Asia (between 650 and 1200 for Lake Van, and between 875 and 1300 for Bahrain). Global warming was linked to strong solar activity, especially between 1100 and 1250 (Brown 2001: 148). However, a short cooler period did occur between 1040 and 1080, known as the “Oort minimum,” which followed a warmer period between 950 and 1030 (Cook *et al.* 2004). Increased solar radiation went along with a decrease in power and frequency of the El Niño phenomenon; a shift of the intertropical discontinuity northward then led to higher rainfall in northern India, continental Southeast Asia, southern and central China, and to

more than doubled between 800 and 1200. Rapidly developing market-oriented production was accompanied by changing agrarian structures typified by the formation of large landed estates. The social imbalances induced by these changes led China's First Minister Wang Anshi to propose reforms during the second half of the eleventh century. Vast private enterprises developed in mining and metallurgy, partly due to a burgeoning military sector. The advent of a private economy also affected ceramic and textile production, in the countryside and in urban workshops. These transformations gave rise to innovations, such as the use of coal, the invention of new types of weapons (repeating crossbows and weapons using gunpowder), and the invention of spinning wheels. Enhancement of productivity, systematically sought after, ensured sustained growth per capita during the entire period. Moreover, the copying of books using xylography helped disseminate knowledge. This conjunction of advances in all sectors of activity led to a profound transformation of Chinese society, with the development of an urban bourgeoisie composed of officials, landowners, and rich merchants, and the birth of a domestic market. Trade and social exchanges were facilitated by the expansion of water transportation (on rivers, canals, and in the ocean) and by a growing monetization of the economy fostered by massive issuances of copper coins and the innovation of convertible paper money at the end of the eleventh century, for which xylography made multicolor printing possible. This development of a domestic market, which imported luxury goods from distant countries, was inseparable from the expanding long-distance trade with Central Asia and southern Asia. The state looked kindly upon taxation of this trade, which yielded a growing source of income. A Smithian and Schumpeterian dynamic was thus being set in motion. China "took advantage of its long-distance influence and improved its economy: higher commercial revenues more or less stimulated the creation of markets for factors of production within China, thereby breaking with the traditional situation of embeddedness of the economy . . . The synergy between markets for goods and markets for factors enabled the development or transformation of technological innovations" (Norel 2007).³ A Chinese merchant class of mixed origin emerged, in addition to the foreign communities widely present in China. Exchanges progressed via the Silk Roads, through trade and the tributes paid by the Chinese to the empires of the Khitan and the Tangut, who served as links with western Asia. Above all, exchanges were multiplying along the sea routes. Improvements to ships (rudder, sails, the use of the compass, all present on Chinese junks by the close of the eleventh century at the latest) shortened travel time and increased the quantities carried.

These developments in Song China engendered a spectacular "takeoff" for the global economy, along with expanding urbanization and a process by which new states were formed throughout Eurasia. R. Mukherjee even writes of an "eleventh-century trade revolution" in the Indian Ocean (2011: 1). The appearance of sizeable junks in the China Sea after the middle of the eleventh century reflects an increase in

warming in Central Asia (Lieberman 2003: 104). Giralt *et al.* (2004: 24) point out that variations in precipitation in the Lake Issyk Kul region paralleled variations in solar activity: increased precipitation in the Lake Issyk Kul region went along with a high number of sunspots.

³ The flourishing of the Song period, writes Norel (2007), allowed China to "create markets for factors of production (probably the most precocious in the world at that time) and [to] commercialize its economy by deepening internal specialization." Elvin (1973: 170) also writes of the emergence of a "national hierarchy of higher markets."

trade, which benefited the Javanese kingdoms of Mataram (formed around 927 in eastern Java) and later of Keḍiri and Singhasari, to the detriment of Śrīwijaya. This period prefigured the flourishing of the three ensuing centuries. The eleventh century was marked by the restructuring of trade networks in South Asia and in the western Indian Ocean. While northern India underwent a phase of political fragmentation, the Indian subcontinent saw the development of a Chola thalassocracy which took control of Sri Lanka and the Maldives for a period of time, and launched raids on the Thai–Malay peninsula and Palembang. In the Chola Empire, a kind of symbiosis emerged between the state – relatively centralized – and large merchant guilds involved in long-distance trade. In the Chola expansion, Pearson sees the origin of the triple segmentation of trade networks that would later prevail in the Indian Ocean (Pearson 2003: 88); however, this segmentation had in fact begun with the decline of the Abbasid Empire, and merely reverted to its former structure, which was well adapted to the systems of winds.

In the Muslim world of western Asia, reorganization took place under the Seljukid Turks, who were Sunnis. They created a new type of state and reconstituted an empire, one that was smaller than that of the Abbasids (Bianquis 2000). The Seljukid sultans held political power; although the Abbasid caliphs were still in place, their role became limited. The tenth and eleventh centuries saw “a scramble for leadership between the three caliphal capitals, Córdoba, Cairo, and Baghdad. This race for power and legitimacy stimulated a dynamic tension which promoted long-distance networks” (Fuʿad-Sayyed and Gayraud 2000: 154), although the eleventh century proved to be a critical one for the three great Muslim centers, partly due to increasingly arid conditions.⁴ It is probably significant that the issuances of money were all but non-existent in the Persian Gulf from the ninth century until the late twelfth century (Deyell 1999: 237). The relative fading out of Sirāf, however, led not to a genuine decline, but rather to a restructuring of the Persian networks, toward Qays and Hormuz, and beyond toward South Arabia and East Africa (as already emphasized, the blossoming of Qays was one cause for the decline of Sirāf). The Red Sea once again predominated over the Persian Gulf, with the Shiite Fatimids taking advantage of trade agreements with the Byzantines, allowing them to supply the Mediterranean market with products from the Indian Ocean. The Fatimids’ ascent also brought about “the expansion and strengthening of relations with the Maghreb and African regions to the south of Egypt” and with sub-Saharan Africa (Rosenberger 2000b). But the situation of the Fatimids deteriorated during the eleventh century, leading to a loss of control over northern Africa; the capture of Sicily by the Norman Roger I between 1061 and 1091; and the creation of Latin states in the Levant following the First Crusade (1098–1099). Within the context of the fighting following the Second Crusade, the atabeg (a Turkish title of nobility) of Aleppo appointed his nephew, Saladin, as vizier alongside the Fatimid caliph. In 1171, Saladin deposed the caliph, and was recognized as sultan in 1176, thus founding the dynasty of the Ayyūbids.

The Ayyūbids in turn made an attempt at developing trade; at the same time, unlike the Fatimids, they asserted themselves as zealous defenders of the Sunnis. Throughout

⁴ Jiang *et al.* (2002) indicate lower Nile flooding in Egypt between 1052 and 1090.

the Muslim world, conversions progressed, along with stricter control over freedom of thought,⁵ with Mongol and Christian threats helping to reinforce the more conservative branches of religion. Arab science may have remained “the most advanced in the world between the eighth and fourteenth centuries,” but “the dominance of religious orthodoxy and political tyranny” prevented any emergence of the experimental method of modern science (the “discovery of the technique of discovery,” as Needham puts it) (Huff 1993: 53).⁶ Free spirits found this second period of Islam more difficult than the previous one; however, several Muslim philosophers who tried to support faith using reason would have a major impact on evolving European thought; especially influential were Ibn Sīnā (Avicenna) and Ibn Rushd (Averroes), who countered al-Ghazālī’s book “Incoherence of the philosophers.”

Aided by favorable climatic conditions, innovations that had appeared in Europe during the previous period in agriculture and animal husbandry sparked what has been called “the agricultural revolution of the Middle Ages.”⁷ Agricultural progress led to demographic growth,⁸ reurbanization, and developments in crafts and trade that triggered western Europe’s reinsertion – albeit peripheral – within the global world-system. The use of water mills – and later of windmills (see below) – increased, in various industries.⁹ Growth also induced internal and external population movements, as well as structural transformations. The Viking expansion between the eighth and eleventh centuries has already been mentioned. During the tenth century, large feudal “states” formed: a Capetian kingdom in France (987), and, more importantly, the German Holy Roman Empire, founded in 962, which theoretically unified Germany and Italy under the rule of Otto the Great.¹⁰ In Spain, after the demise of the caliphate

⁵ “Individual jurists and religious leaders sometimes issued religious rulings (*fatwas*) for impiety against those who became too expert in the secular sciences” (McClellan and Dorn 1999: 114). Teaching of the “foreign sciences” (essentially Greek science) was prohibited in the madrasas. Movements of religious intolerance occurred here and there. The Almohad ruler al-Mansūr (1184–1199) thus ordered that books dealing with logic and ancient philosophy be burned and forbade their study. Alongside the development of dogmatic streams in Islam, the twelfth century and – more importantly – the thirteenth were periods that saw the crystallization and upsurge of Sufi currents.

⁶ In the same way, “perhaps due to the grip exerted by the Hindu religion, India never developed an autonomous science” (Ronan 1988).

⁷ Mazoyer and Roudart 1998: 259ff., 286. In northern and western Europe, new agricultural techniques used ox- or horse-driven heavy plows, and later a three-year crop rotation system. Northern Europe’s agricultural revolutions, including the revolution of the eighteenth century, saw changes that were less dramatic than those experienced in dry regions (with the development of irrigation) or in rice cultivation (in China, India, and western Asia).

⁸ However, it was also demographic pressure that made it possible for people to invest in more intensive cultural practices (Boserup 1998: 21ff.).

⁹ Such as grain mills, oil mills, tanneries, sawmills, and the steel industry. The water mill was already known in Roman times. Hobson (2004: 127) connects the mill in medieval Europe with the use of the “trip hammer,” a Chinese invention also known in the Roman world. The idea of the windmill was introduced from western Asia through the Crusades. It was improved in Europe with “the invention of adjustable sails” (Mazoyer and Roudart 1998: 296–297).

¹⁰ The adjective “Holy,” however, did not appear until 1157, and the title *Sacrum Romanum Imperium* around 1184. The term *Deutscher Nation* would be added during the fifteenth century. During the tenth and eleventh centuries, Latin Christianity extended, northward (Denmark, Norway) and eastward (Poland, Bohemia, and Hungary). Greek Christianity progressed in Russia, and later in Bulgaria and Serbia.

of Córdoba in 1031, the loss of Toledo in 1085 proved to be the first serious setback of the Iberian Muslim world.¹¹ Contacts with the Muslim world brought about the discovery, by Christian Europe, of Greek and Arab thought, science, and techniques (the introduction of “Arabic” numerals [these were Indian numerals originally] is apparent in Spain in Latin manuscripts as early as 976; Europe also learned the use of the abacus and the astrolabe).¹² Merino sheep were introduced from northern Africa into Castile around the same time. This “rebuilding of sovereignty” in Europe made trade and monetary circulation revivals possible; these processes were accompanied by institutional innovations and technical progress (Aglietta 2009). The twelfth century saw the building of the great cathedrals, and the early thirteenth century saw the emergence of the state in France, under Philippe Auguste’s reign (1180–1223).¹³ Philippe Auguste was guided by the efforts of Henri II from England in administrative matters. Statebuilding continued in France under Louis IX (1226–1270) and Philippe le Bel (1285–1314), who encountered papal opposition after announcing his plan to impose taxes on the clergy. In 1309, Pope Clement V, newly elected with the French king’s support, settled in Avignon, which would remain the papal residence until 1377 (a Western schism would lead to the installation of anti-popes at Avignon as of 1378). Various Chinese innovations appeared in Europe at this time (often transmitted via the Muslim world), for example, the axial rudder on ships; paper;¹⁴ the winding machine; and the wheelbarrow. The Crusades of the eleventh, twelfth, and thirteenth centuries obviously played a role in the transmission of goods and knowledge from various Asian civilizations. Mention has been made of a compass, in 1190. Alcoholic distillation is described in Salernitan texts dated to the twelfth century; here again, these texts may reflect Chinese input, combined with Islamic influences.¹⁵ Manuscripts attributed to

¹¹ The Muslim princes of Spain then called on the Almoravids, who had been ruling the Maghreb since 1056. The Almoravids gave way to the Almohads, in Morocco and later in Spain as well as in the rest of the Maghreb as of 1147.

¹² Gerbert d’Aurillac (845–1003), who became pope under the name Sylvester II, may have brought back an astrolabe from Catalonia. Huff (1993: 61) correctly points out the impetus given to philosophy and science by the translation and study of Arab and Greek authors during the twelfth and thirteenth centuries in Europe, a phenomenon inseparable from the development of universities. The great schools of translators were located at Toledo, in Sicily (Palermo), and in southern Italy. Among the main translators were Adelard of Bath (c. 1070–1150), Robert of Chester, and more importantly Gerard of Cremona (1114–1187), who ruled a workshop of translators in Spain (McClellan and Dorn 1999: 184). But there was also a direct flow of scientific information, without first going through a translation, due to scholars schooled in Latin who learned Arabic (for example, John of Seville during the eleventh century, and Fibonacci during the twelfth–thirteenth century, who learned how to use the abacus at Bougie in northern Africa and introduced “Arabic” numerals in his *Liber abaci*). Jewish scholars working at the interface of several cultures were also active in disseminating knowledge (Djebbar 2001: 140ff.).

¹³ Various Christian heresies developed in Europe. The success of the Cathar movement in southwestern France, influenced by Bogomilism from the Balkans, led the papacy to launch the “Crusade against the Albigensians” (1209–1229); this crusade was prolonged by the creation of the Inquisition in 1231, meant to eradicate heresy.

¹⁴ Arabs created the first paper manufactures in Europe, in Sicily by 1000 CE and in Spain around 1150. The first manufacture in Christian Europe was created in Italy, around 1276.

¹⁵ Needham *et al.* 1980: 123. The name “aludel” given to a sublimation or distillation vessel used by alchemists is of Arabic origin (*al-’utāl*). A cooling-bath embracing the upper part of the still bore the name “Moor’s head” (Needham *et al.* 1980: 91–92, 129ff.). Alcohol was called “burnt-wine” in Europe (German

the priest and mathematician Michael Scot (c. 1175–1232), who lived in Bologna, Palermo, and Toledo, refer to *Aqua Ardens*, the name for distilled alcohol (Buxton and Hughes 2014: 50).

At the same time, legal and institutional changes were bringing about innovative social and economic dynamics. After Berman (1983), Huff (1993: 119) discusses the “revolutionary nature of the legal and institutional reforms undertaken.” Lieberman also emphasizes the “value placed on property rights, urban autonomy and [the idea of] contractual government” as entities specific to Europe (2003: 68). The split between Europe’s ecclesiastical and secular jurisdictions during the eleventh century was the first step toward the emergence of cities and autonomous corporations (this split between the secular and ecclesiastical domains never occurred in the Muslim world prior to the modern period) (Lieberman 2003: 80, 138). Indeed, in 1073, during the “Investiture Controversy” opposing Pope Gregory VII and Henri IV, ruler of the Holy Roman Germanic Empire, the pope forbade the appointment of bishops by kings, and in 1075, published the *Dictatus papae*, which affirmed the preeminence of the Universal Church; the pope assumed the right to depose princes and bishops. The Gregorian reform asserted the primacy of the pope and Church autonomy. One notes a revival of Roman law during the eleventh century in Italy (the university of Bologna taught Roman civil law as of 1087), during the twelfth century in southern France, and during the thirteenth century in the northern regions. In England, an essentially jurisprudential law was asserted (founded on common law); the presence of juries in the tribunals helped protect individual freedoms, certainly more effectively than on the continent (Goldstone 2008: 111). Moreover, in 1140, a Tuscan monk, Gratian, wrote what is known as “canon law” by harmonizing previous texts and taking Roman civil law into account (*Concordia discordantium canonum*); canon law stipulated the payment of annual dues to the papacy by abbeys, princes, lords, and free cities. The payment of taxes revived monetary circulation; exchange markets made their appearance, and pontifical changers became “merchant-bankers” (Lopez 1979; Aglietta 2009). Credit developed, along with the banks, which paid interest on the money deposited, and invested this money. From the twelfth century onward, one observes a progressive emergence of capitalist practices in Europe, a feature even more prevalent later during the thirteenth century (Braudel 1979; Wallerstein 1999c; Mielants 2007: 16ff.).¹⁶ Unlike what is put forth by a Marxist current, Braudel has not deemed feudalism a prerequisite for the development of capitalism; Braudel does

Branntwein, English brandy) as it was in China (Needham *et al.* 1980: 133). Chinese alchemy appears to have influenced various European scholars, such as Roger Bacon (thirteenth century) and Arnau de Vilanova (fourteenth century), probably via Arabic texts from the Persian Jābir ibn Ḥayyān (Geber) or other authors, and also perhaps in more direct ways (Needham *et al.* 1980: 492ff., 507). Geber is credited with inventing the retort, showing a cooling device at the neck; thus, Geber may have obtained alcohol from distilled wine. Al-Kindī (who died in 873) describes the production of alcohol extracted from the distillation of wine in his *Kitāb al-Taraffuq fi-al’itr*.

¹⁶ In *Der Moderne Kapitalismus* (1902–1928), W. Sombart has already pointed out the emergence of a “capitalist” spirit in medieval cities, prior to the rise of capitalism. For M. Weber, “it was only in the Middle Ages [in Europe] that the legal forms necessary” for the rise of the capitalist enterprise were created (see Bruhns 1998: 46).

feel, however, that feudalism bestowed rights and privileges, allowing an industrial and merchant class to institutionalize its position (2002, 11: 581ff.).¹⁷ The flourishing of corporations thus introduced new political ideas, such as the concept of constitutional government; the right to legal representation; the notion of consent in political decision-making, and even the power of autonomous legislation.¹⁸ These developments would provide Europe with a capacity for mobilizing resources that western Asia, India, or Egypt probably lacked. Thanks to their guilds, cities obtained charters of emancipation from their lords, allowing them to administer themselves under the direction of “aldermen” in northern regions and of “consuls” in the south. Philosophers influenced by Platonistic currents took up the idea of a rational order of the world: the laws of nature were supposed to operate autonomously.¹⁹ These innovations, “the way [various institutions] [the proto-capitalist city-states, the territorial states, and the supranational Church] combined and the milieu they produced,” would give Europe a decisive advantage in the ensuing centuries (Adshead 1995: 110). “Unlike the western cities . . . , a class of notables exercising an institutionalized counter-force in the face of the state’s power never emerged in the cities of the Arabo-Muslim world; there was never any true urban government similar to that of our medieval towns” (Denoix 2000: 285).²⁰ The rulers of the emerging states were forced to negotiate with the elites, especially for the development of taxation, within the framework of Parliaments where these elites (nobles, clergy, and the bourgeoisie) had representatives (Wong 1997: 87).²¹

The inroads made by Westerners into the Mediterranean were symptoms of these ongoing changes. As early as the tenth century, expanding trade between the Christian and Muslim worlds (especially Fatimid Egypt) led to the formation of the first Italian city-states, oligarchic republics which “gradually inserted themselves into the spaces between the dominant economies” (the Muslim powers and the Byzantine Empire) (Braudel 2002, 111: 109). They would form a semi-periphery of the Afro-Eurasian world-system from the twelfth century onward. Moreover, the Normans conquered southern

¹⁷ The development of a private sector is already apparent during the Bronze Age especially at times of political fragmentation (see Volume 1). J. Goody (2007: 200) refutes the purported role of feudalism in the emergence of capitalism.

¹⁸ Huff 1993: 120. The concept of the corporation was not truly present in the Muslim world (see Muqaddasi [died c. 1000], discussed by Goody 2007: 228).

¹⁹ Some philosophers such as William of Conches go so far as to suggest that if “passages of the Bible contradict reason and the natural order, then the Bible should not be taken literally” (Huff 1993: 103). The figure of Peter Abelard (1079–1142), who developed the dialectic, influenced the thought of the twelfth and thirteenth centuries and this process of “rationalization of the world.” During the same period, the Muslim world, in contrast, tried to limit the power of reason (Huff 1993: 107–117).

²⁰ Goody (2007: 215ff.) criticizes the emphasis put on the uniqueness of European medieval cities that has been pointed out by many researchers in contrast to African and Asian cities; however, Goody has difficulty establishing the similarity of all these cities.

²¹ The idea that counties and cities must be represented in a Parliament developed in England during the thirteenth century: the *Magna Carta* was signed by King John in 1215, and confirmed by Henry III in 1225. The king had to take account of the opinion of the assembly, including barons and bourgeois; the assembly exerted some control over the expenses of the state. A Parliament was set up in Paris in 1307. At the same time, representatives of the cities were admitted into the Spanish Cortes.

Italy and later Sicily between 1060 and 1092, and the Christian Crusades assailed the Muslim core (western Asia–Egypt) from the late eleventh century onward. Genoa, Pisa, and above all Venice benefited from these Crusades.²² The “help” that Venice extended to the Crusaders did not prevent the city from making pacts with Saladin and his successors. Later on, the Italians would be increasingly present in Egyptian ports. The Muslim merchants’ scope for action then became even more restrained in the Mediterranean (Garcin 2000). In 1176, the Lombard League, which united various city-states of northern Italy with the support of Pope Alexander III, defeated Emperor Frederick Barbarossa at Legnano. From the mid-thirteenth century onward, administrations set up monopolies on salt (*ordines salis*) which “served both as fiscal support for the state and as financial regulation for the economy,” at Genoa, Venice, in the county of Provence, and in the kingdom of France (Adshead 2004: 183).²³

To the east, the Byzantine Empire reached its peak under Basil II, who allied with the Russians and annexed Bulgaria (at the cost of bloodshed) as well as Armenia, the Caucasus, and Georgia. Moreover, an advantageous peace was signed with the Fatimids. Arab books were translated into Greek at this time; western scholars would rediscover these works during the fifteenth-century Renaissance. Located between two expanding worlds, and struggling with internal problems partly linked to overextension of the state and to the power acquired by military magnates, the Byzantine Empire appears to have experienced political and economic difficulties after Basil’s death in 1025. In 1054, the rupture between the Byzantine and Latin Christianities was complete. At the same time, the Byzantine Church was imposing discriminatory restrictions on marriages between Orthodox and Monophysite Christians. The empire’s non-Greek and non-Orthodox subjects were ostracized (most of the great families of the military aristocracy, however, were of foreign origin) (Browning 1980). The state grew weaker, with magnates obtaining the right to tax farmers (Burbank and Cooper 2010: 67). The fiscalization of military obligations and abandonment of the *themata* system led to mercenarism under Constantine IX (1042–1055). The disintegration of the army during the second half of the eleventh century, within the context of fights between military and civil aristocracies, explains the military setbacks of Byzantium, which lost Anatolia following several defeats against the Seljuks, especially at Manzikert (1071). Threats also came from the Normans, who took Bari and expelled the Byzantines from Italy, and from the Pechenegs, who devastated Thrace (they were defeated near Byzantium in 1091). At the same time, Genoa and Venice gradually took the upper hand in trade, partly by force. In exchange for naval support for Byzantium against the Normans, the Venetians obtained commercial advantages in 1082, including a right of free trade

²² One might disagree – even for the ensuing period – with M. Lombard’s Eurocentric position: “After the eleventh century, the center of gravity of the Ancient World shifted. The economy’s powerhouses were no longer in the Orient, in the great cities of the Muslim world; they emigrated to the West and were now located in the merchant cities of Italy and Flanders and, midway between these two regions, in the Champagne fairs” (1987: 259). From the eleventh through the fifteenth century, Lombard establishes connections between “the rise of the West” and “the decay of the Orient” (1987: 258). A relative decline did in fact intervene only much later, during the nineteenth century, at least on the economic level.

²³ Unlike China, Europe set up “salt administrations” which favored private investors over the state (Adshead 2004: 183–184).

throughout the Byzantine Empire, paying no taxes, as well as settlement in a quarter of Byzantium: this city in fact abandoned the benefit of its position as intermediary between the east and the west to the Venetians. The building of an arsenal at Venice in 1104 played a crucial role in this city's rise to power. The symbiosis of the political and merchant elites, the alliance of capitalistic practices with an aggressive colonialism, all marked the expansion of the Italian city-states and formed the rationale for and the characteristics of an emerging European capitalism, in contrast to the situation prevailing for merchants in Asia (Mielants 2007: 113). Violence was not only exerted in long-distance trade with the setting up of unequal exchange by all possible means; it was also present in the merchants' sway over production processes and their exploitation of a local labor force. In parallel, the notion of citizenship developed by the European city-states provided "the juridical apparatus [that allowed the merchant class] to preserve its power" (Mielants 2007: 161).

And yet, the successor to Alexis I (1058–1118), the Byzantine emperor John II (1118–1143), managed to consolidate and broaden the empire in Anatolia, to the detriment not only of the Seljuk, but also of the Norman principality of Antioch and the Armenian kingdom of Cilicia. At the same time, the emperor renewed the treaty with Venice in 1126, and – in order to counterbalance the Venetian power – granted rights to Pisa and Genoa. His successor, Manuel I (1143–1180), dreaming of rebuilding a Roman empire in the Mediterranean, engaged in a disastrous expansionist policy, punctuated by a series of defeats, at Brindisi in Italy against the Normans; at Myriokephalon in Anatolia against the Seljuk; and at Damietta in Egypt. The empire, now ruined, broke up under Isaac II (1185–1195), who also made the mistake of opposing the passage of the Third Crusade. Another mistake was committed in 1182, when Andronicus I expelled the Italians. Byzantium received its final blow in 1204 when the Fourth Crusade, instrumentalized by Venice, looted the city, paving the way for a carving-up of the Greek Empire.²⁴ The capture of Byzantium allowed Venice to appropriate five tons of gold in one swoop. This episode "marked the beginning of Venetian hegemony in the eastern Mediterranean" (Norel 2004: 163). The Venetians captured Crete and strategic locations in the Aegean Sea and the Ionian Sea; they settled in the Black Sea (Soldaia, Crimea) at the junction of several trade routes.

The entire world-system experienced strong growth during the twelfth century, as is clearly seen along the Chinese and Indian Ocean sea routes. China's interest in maritime trade increased by 1127, when the Song were forced to abandon the northern parts of their territory to the empire of the Jin, founded by Jürchen; they moved their capital to Hangzhou, which became the world's largest city (the second being Cairo, at the other end of the "spice routes").²⁵ The Southern Song encouraged the development

²⁴ In 1176, Benjamin of Tudela describes the military weakness of Byzantium as well as its magnificence: "There is no such city as Byzantium in the entire world, except Baghdad. The merchants come [into Byzantium] from the countries of Babylon, Sinear, Persia, from the whole kingdom of Egypt, Canaan, the kingdom of Russia, Hungary, Patsinakia, Kazaria, Lombardy and Spain" (Harboun 1986: 86). Benjamin also points out the hatred of the Greeks for the Jews, and set this against the peace and the honors the Jewish community enjoyed in Baghdad (1986: 109).

²⁵ Morris, however, gives the same estimates for Cairo, Baghdad, and Constantinople in 1200 CE: 250,000 inhabitants (2013: 150); he gives 1,000,000 inhabitants for Hangzhou in 1200 and 80,000 in 1300 CE (2013: 156).

of rice cultivation and cash crops (hemp, mulberry, and cotton) destined specifically for the textile industry. These agricultural advances benefited from the arrival of migrants from the north, while the textile industry gained from improvements in various types of spinning wheels and looms. Already during the Northern Song period, “a machine was perfected for reeling silk . . . In the thirteenth century, the reeling machine was adapted for the spinning of hemp thread” (Elvin 1973: 195). At the same time, a system of contract work appeared, which would disappear during the Yuan period. Progress was also seen in the porcelain industry and the armaments sector, with its production of diversified weapons using powder. This said, the loss of the northern coal mines, now in the hands of the Jürchen, held back iron production. The intellectual progress begun during the Northern Song period continued, with a multiplication of public schools and public or private libraries.

The mercantilist orientation of the Song state worked in favor of an emerging capitalistic spirit, both in state enterprises and in the flourishing private sector. Commercial taxes and monopolies ensured 70 percent of the state’s income. Expanding domestic and external trade went hand in hand with a growing division of labor and geographic specialization. One notes new progress in the markets of factors of production, with labor mobility and a monetization of the economy, sustained by the increased use of paper money – also reflecting an escalation in military spending. At the same time, the development of bills of exchange allowed for a credit boom (although loan rates were higher here than they were in Europe). We see silver emerge at this time: it served as a means of storing value and paying certain taxes. This situation resulted in part from the influence of the Central Asian “silver area,” on the one hand, and from a hemorrhage of copper coins caused by the acquisition of luxury goods from the southern seas and horses from the Jin and Xixia empires, on the other. The loss of the copper mines of northern China prevented the Song state from maintaining its previous issuance of copper coins. Partnerships developed between the state and the private sector, with some interpenetration between the merchant class and state elites, but in China we see no truly autonomous cities, guilds, or schools, as found in Europe. Social mobility and entrepreneurial freedom within China, however, remained remarkable, as well as the increasing presence of the Chinese in Southeast Asia and in the Indian Ocean. Chinese junks reached India and the Persian Gulf (perhaps also East Africa); works by Zhu Qufei and Zhao Rugua describe the Indian Ocean trade routes and list the main products exchanged. China had significant links with South India and the Muslim world; many Muslims sojourned in China; and part of the Chinese merchant class was Muslim. As already noted, various Chinese innovations reached Europe at this time, via the Muslim world.

The urban population increased notably from 1100 onward throughout the Ancient World, particularly in China and India.²⁶ An expansion can be seen in Japan and continental Southeast Asia: Kyoto, Kamakura, Angkor, and Pagan now joined the list of the twenty-five largest cities of the world established by Chandler (Bosworth 1995).

²⁶ A. Wink suggests the figure – perhaps overestimated – of 100 million inhabitants for India during the late twelfth century, “approximately the same number as in China at about the same time” (1997: 166). In contrast, Central Asia and Mongolia had only 4,250,000 inhabitants during the mid-thirteenth century, according to the same author.

This evolution was clearly connected to the favorable climate trends of this period, marked by an increase in average global temperatures (for Europe, this is known as the “Medieval Climatic Optimum”). This warmer period extended from 950 to *c.* 1260 (Mann *et al.* 2008), with a brief temperature dip around 1110.²⁷ It was during the eleventh and above all during the twelfth century that the fewest instances of low Nile flooding ever recorded in a single century occurred (ten during the eleventh century, and only three during the twelfth century) (Quinn 1992) (Jiang *et al.* [2002], however, indicate lower Nile floods between 1052 and 1090).

Beyond the China Sea and the Gulf of Bengal, trade grew throughout the Indian Ocean during the twelfth century. In the western Indian Ocean, during the eleventh and twelfth centuries, Jewish merchants tended to dominate trade in the Red Sea and between Yemen and India (Goitein 1954a; Goitein and Friedman 2007). Muslim networks were later prominent in the expanding trade. The *kārimī* merchants held a growing place in the Red Sea, supported by the Egyptian state of the Ayyūbids, who controlled Yemen. In connection with this trade, Islam progressed in southern Asia, in Gujarat, a region which traded primarily with the Persian Gulf but also with Aden, and on the Malabar coast, which was more closely linked to South Arabia and the Red Sea. Islam also progressed in Swahili towns, which benefited from East Africa’s integration into the world-system: this region acted as a semi-periphery, an intermediary between the system’s cores and a hinterland providing gold, ivory, and slaves.²⁸ The formation of the states of Mapungubwe, in the Limpopo River valley, and later that of Great Zimbabwe, occurred partly in connection with the development of the Swahili coast, where Kilwa held a preeminent position from the twelfth century onward, thanks to the control of the gold trade of Sofala on the one hand, and to its geographic position in the monsoon system on the other (Newitt 1995: 8; Fleisher 2004b: 97).

While islamization in East Africa remained limited to coastal areas, the process was different in West Africa. As early as the eighth century, merchants from the Maghreb introduced Islam along the caravan roads. Islam progressed through the merchant networks (for the local population, conversion was one way of entering these networks) and through islamization of the elites,²⁹ who did not merely attempt to secure supplies

²⁷ Moreover, J. Esper *et al.* (2014) signal low summer temperatures in northern Europe in 1130.

²⁸ See above. On the notion of semi-periphery, taken from Wallerstein (1974b), see Chase-Dunn and Hall 1997: 37, 78ff.

²⁹ African kingdoms converted to Islam around the eleventh century. The Andalusian geographer al-Bakrī (*c.* 1068) has described three different situations. In the lower Senegal valley, the kingdom of Takrūr provides an example of a zealous allegiance to Islam. At Gao, in the Songhay kingdom, the ruler became a Muslim, but the population remained largely pagan. The state of Ghana was ruled by a “pagan” king who nonetheless invited Muslims into his capital and employed Muslim scholars at his court (Levtzion 2000: 63–65). The capital of Ghana may have been taken by the Almoravids in 1076 (this episode is still a topic for debate; see Fauvelle-Aymar 2013: 95); during the twelfth century, al-Zuhri writes that the people of Ghana converted to Islam “in 1076,” and Idrīsī gives Ghana as a Muslim state (its king, in any case, was Muslim). Idrīsī describes a capital which is no longer Kumbi Saleh (its location is unknown). In the Lake Chad region, the kingdom of Kanem became Muslim in the early twelfth century. During the first half of the thirteenth century, the king of Kanem made the pilgrimage to Mecca and had a madrasa built in Cairo for the students from his state (Fauvelle-Aymar 2013: 80). In the Hausa country, the introduction of Islam may date to the fourteenth century. As Fauvelle-Aymar notes (2013: 101), the spate of conversions from the tenth century onward were “a political answer to a situation of competition

in luxury goods: in Africa, as elsewhere, traditionally, kings claimed, through conversion, to attain the dominant religions' divine efficiency. The religious choices made by these rulers depended upon each ruler's degree of integration within the world-system and role as mediator.³⁰ Moreover, Islam provided a tool for social and political cohesion in western Africa, in states with disparate populations. The trans-Saharan routes saw increasing trade, and specifically, a flourishing slave trade. As in East Africa, the wish to protect oneself from slave raids explains some conversions to Islam. Each year between 800 and 1600, from 3,000 to 8,000 slaves may have been traded along the trans-Saharan routes (Lovejoy 2000: 25). Lovejoy points out the institutionalization of slavery in the African states. "The legitimization of enslavement reinforced a tendency toward war and other forms of violence" (2000: 35). As was the case in the Mediterranean Sea and the Indian Ocean, networks implied connections between sedentary and itinerant merchants, some of the latter being agents of the former (and some of them were slaves). The widespread use of credit facilitated transactions (Prange 2006). The connection of West Africa with networks reaching the Indian Ocean is shown in the use of cowries as currency as of the twelfth century, in Mali and the Songhay kingdom.³¹ During the fourteenth century, Ibn Battūta notes the use of

between kingdoms." "Superior knowledge linked to power, Islam first concerned the rulers" (2013: 101). In connection with the trans-Saharan trade, the Jolof kingdom (Senegambia) emerged during the thirteenth century (Boulègue 1987, 2013).

³⁰ Levzion (2000: 66–68) shows how the Malinke kings adopted different religious positions, according to the size and degree of integration of their kingdoms in the world-system: these were more Islamic during periods of integration, but oriented more toward "traditional religion" during periods of systemic decline. The adoption of a foreign religion by an elite monopolizing links with other countries is seen in the expansion of Christianity in the Kongo kingdom during the fifteenth and sixteenth centuries (see below). The Kano Chronicle also provides a good example of the superior magic powers attributed to Islam (Levzion 2000: 82). The expansion of islamized kingdoms south of the Sahara also corresponds to expanding links to forest regions near the coast, which yielded gold, ivory, slaves, precious woods, kola, and maniguette pepper. The great period of Ife began during the twelfth century. The state of Benin emerged from the fourteenth century onward. Further west, near the Black Volta, Begho developed from 1100 on and became a commercial hub during the fourteenth century, in connection with Jenné and the Niger valley. Jenné "supplied Timbuktu with gold from the southern regions" (Coquery-Vidrovitch 1993). The Wangara (Jula or Dyula) networks (Soninké and Malinké merchant clans [see Terray 1995: 53]) appear to have been active in trade and in the spread of Islam eastward and southward, especially from Jenné. The Islam practiced by the Jula was marked by Ibadiism, whose "ability to accept otherness supported the coexistence of pagans and Muslims" (Rey 1996) (Jula Islam followed the Malekite doctrine only much later). The Jula established small colonies along the main trade routes; they settled at Begho at the end of the fourteenth or at the beginning of the fifteenth century (Coquery-Vidrovitch 1993; Terray 1995: 52; Massing 2000) (Terray also shows the role the Jula may have played in the process of state-building). Muslim merchants brought salt, textiles, copper items, cattle, glass beads, and horses from the north. Textile manufacturing developed in sub-Saharan Africa from the fourteenth century onward, particularly in Mali (Mielants' statement [2007: 135] that the wealth emanating from control over trade routes was not invested in productive industries is certainly in need of nuancing). The Muslims introduced a type of vertical loom used in northern Africa and Muslim Spain into regions south of the Sahara. Devisse (1972: 359ff.) shows how the development of the Mali state modified the ways in which commercial and cultural African exchanges were organized. The Mali Empire exploited copper at Takaddā, and may have exported this metal to Egypt.

³¹ Al-Bakrī, c. 1067, mentions cowries among the goods imported at Kougha (Songhay kingdom). See also al-Zuhri (twelfth century.). Cowries dated to the early second millennium have been excavated at Kumbi Saleh, Tegdaoust, Azelik (Niger), and south of Gao (Insoll 2003: 249). Ibn Sa'īd writes of caravans leaving

cowries in western Sudan: “I saw cowries being sold at Malli [Niani?] and Gawgaw at the rate of 1,150 for one dinar.”³² Ibn Battūta mentions the transporting of cowries as ballast in Yemeni ships. The shells may have been carried along various routes: Egypt, the Levant, then perhaps Venice (Hogendorn and Johnson 1986: 15) (Venice was familiar with cowries; Marco Polo called them *porcellani*).

Mongol Expansion and a Restructuring of the Asian World

The thirteenth century was a key period in the history of Asia and the Indian Ocean.³³ While this century was a time of crisis and restructuring, it ended up ushering in new economic growth, which peaked during the first decades of the fourteenth century.³⁴ Whereas the eleventh and twelfth centuries corresponded to the “Climatic Optimum” which had begun during the late tenth century, conversely, the early thirteenth century underwent a phase of global cooling which may have influenced the start of the Mongol expansion.³⁵ This would hold true if we adhere to N. Di Cosmo’s idea of

from Sijilmāsa for the empire of Ghana, carrying copper, cowries, figs, and salt (Hogendorn and Johnson 1986: 16). A merchant from al-Mahdiyya writes: “Cowrie shells have no market here in the winter. They are traded only with people coming by sea during the summer . . . In 1055–1056, half of a bale of cowrie shells was sold from Kayrawan for the equivalent of 55 dinars” (Goitein 1967: 275, 373 n. 15). Gold was used as currency for sizeable transactions, for example in the Mali Empire (Terry 1995: 72).

³² Ibn Battūta 2002: 234. The location of the capital of the Mali Empire remains uncertain (Fauvelle–Aymar 2013: 17). The veracity of Ibn Battūta’s travels in Mali has been cast into doubt (Hirsch and Fauvelle–Aymar 2003). If Ibn Battūta did not go to Mali, then the Moroccan traveler collected data from reliable informants. Slightly earlier, al-‘Umari indicates that commercial transactions in the empire of Mali were already handled using cowries, “imported by merchants for their greatest benefit.” In Kanem–Bornu, on the other hand, cowries do not appear to have been in use before the nineteenth century. Other products came from the Indian Ocean. Al-Maqqari mentions the transportation of coconuts to the north via caravans during the thirteenth century (Devisse 1972: 365). The period when the coconut tree was introduced into West Africa remains unknown.

³³ The construction and then disintegration of an Afro–Eurasian world-system during the thirteenth and fourteenth centuries lies at the heart of J. Abu-Lughod’s work, published in 1989. This author describes eight trade circuits which overlapped three or four core regions (also 1993: fig. 9.4). Curiously, East Africa and West Africa are not included within the subsystems listed in this work. In fact, East Africa is an area where several subsystems overlapped; these were centered on Egypt (the Red Sea), Mesopotamia (the Persian Gulf), and (western and southern) India, respectively. Abu-Lughod claims that East Africa exported no significant products for the system, whereas the gold from Zimbabwe did become a crucial export (as did gold from Ghana, for western Africa). Abu-Lughod’s position has been criticized by various authors, for example Barendse (2000: 179). Yet it is difficult to follow Barendse when he writes that “the repeated shifts of gravity of trade to India from the Middle East between the Persian Gulf and the Red Sea seem to be primarily related to the price of gold” (2000: 179). Many other factors must be taken into account.

³⁴ It is surprising to read in Frank and Gills (1993b: 300) that “a B phase [phase of recession] started in 1250.” However, Bosworth (1995: 219), who relies on Chandler’s population estimates for the world’s largest cities, holds the same opinion (see below). Chaudhuri (1985) also notes a decline during the thirteenth century, as does Lieberman (2003: 2), who mentions the collapse of some political entities, without taking into account the emergence of new powers.

³⁵ The cooling period was marked by increased aridification or wetter conditions, according to region. For semi-arid regions in China, Z. S. An and L. G. Thompson (1998: 20, 28) indicate an arid phase between 1150 and 1250, with a marked decline around 1200. N. A. Bokovenko (2004: 28) states that the cool phase corresponding to the Mongol expansion was accompanied by a wetter climate in the steppes (versus Tan

a militarization of pastoral societies in response to crisis situations.³⁶ The Mongol expansion could rely upon the evolution and political experience of Central Asian societies, and upon the ideology of conquest promoted by charismatic leaders. The steppe populations proved increasingly able to deal with diverse peoples, and to build up strategies of control over vast territories: historical facts contradict the idea of Mongol inexperience with the political administration of large regions (Honeychurch and Amartuvshin 2006: 262, 275). In 1217, the armies of a Mongol chief, Genghis Khān, took Beijing, capital of the Jin dynasty, and all of northern China. The Mongol conquest was extremely violent, and a part of the Chinese population was massacred or died from famine. And from 1219 to 1221, the Mongols destroyed the empire of Khwarezm, which controlled Transoxiana and Khorasan, and entered the Russian steppes.

The unification of Central Asia within Genghis Khān's Mongol Empire, which extended from the Pacific Ocean to the Black Sea at his death, triggered direct contacts between China and Europe via a steppe route which ran north of the oasis routes (the "Silk Roads"). First located at Avargyn Balgas, in the core of Genghis Khān's home

et al. 2003; Giralt *et al.* 2004; P. Austin *et al.* 2007; see below). According to J. L. Brooke, "the Mongol invasion of North China" in 1214 followed thirty years of cold summer conditions in both regions (2014: 369). As Brooke puts it, "it was a violent conquest in a time of cold" (2014: 370). One notes also that the climate became more variable in the sub-Saharan area during the thirteenth century (MacEachern 2005: 452). Cf. Mann *et al.* (1999), Mann (2000), Esper *et al.* (2002), D'Arrigo *et al.* (2006). W. H. Quinn (1992) points out that the lowest Nile flood ever recorded occurred in 1200 (appearing to correspond to a particularly strong El Niño phenomenon); Nile floods weakened once again in 1201 and 1202, leading to poor harvests and famine. R. Y. Anderson (1992) also noted an increase in the frequency of El Niño events prior to 1200. Lieberman (2003: 102–103), in turn, gives data indicating a cooling phase occurring later, between 1250 and the beginning of the fourteenth century. W. G. Burroughs (2001: 294) and A. Moberg *et al.* (2005) show a major decline in global temperature around 1280 (see also Mann *et al.* 2008). M. E. Mann *et al.* (1999), T. J. Crowley (2000), and J. Esper *et al.* (2002) indicate two periods of lower temperature, around 1230/1250 and 1275/1290. D. D. Zhang *et al.* (2007: fig. 2) show four drops in temperature during the thirteenth century, with a nadir around 1290, confirmed by dendrochronological data (Cook *et al.* 2004). K. Treydte *et al.* (2006) signal a weakening of the summer monsoon in southern Asia during the thirteenth century, particularly during its second half. Brooke indicates weaker monsoons in the Bay of Bengal c. 1290 (2014: 251). G. Mische *et al.* (2007) point to an arid and cool phase between approximately 1190 and 1370 for part of Mongolia. The world population shows a slight drop during the thirteenth century (McEvedy and Jones 1978). The drop in temperature in the 1320s and 1330s, however, appears to have been much more severe than previous decreases (see below). For southern China, a demographic peak was reached around 1200; the population then decreased during the thirteenth and fourteenth centuries (Marks 1998: 56).

³⁶ N. Di Cosmo also gives the example of the Turkish Empire of the sixth–seventh centuries and of the Khitan Empire (tenth century) (see above). This militarization allowed the central Asian empires to corner external revenues by means of several successful strategies, successively developed, including the extortion of tributes (the Xiongnu Empire of the second and first centuries BCE); commercial partnerships (Turkish and Khazar from the sixth to the tenth century); dual administration (the Khitan Empire from the tenth to the twelfth century); and lastly, direct administration, with taxation of the populations controlled; this policy was initiated by Genghis Khān and continued by Ögödei (Di Cosmo 1999a: 27ff.). "The adoption of a new strategy [as dominant mode to levy surpluses], as Di Cosmo points out, did not imply the abandonment of ancient strategies: we can see the combination of various methods employed to corner surpluses. The idea of Mongol inexperience in imperial administration is obviously erroneous: there were both legacies from past empires and borrowings" (Honeychurch and Amartuvshin 2006: 275).

region, the Mongol capital was finally established at Karakorum, in a more central position on the trade routes, in the Orkhon valley, near Ordu Balik, the ancient capital of the Uighur Empire. This empire gave the Mongols its writing and various institutions, such as the military organization of the *ordo*. Uighurs, Khitan, and other foreigners provided the Mongol Empire with managers, who made optimal use of its diversity, by borrowing techniques and knowledge from other regions (Anderson [2005: 118] writes of a “conscious globalization of knowledge”). Avargyn Balas remained the ceremonial center, where annual rituals were held, aimed at uniting the Mongol elites; as had been the case in previous empires, religion played a major cohesive role for dominant groups (Honeychurch and Amartuvshin 2006: 270).

The successor to Genghis Khān, Ögödei, seized northern China, Persia, and eastern Europe. Stopped by his death in 1241, the Mongol expansion continued under Möngke, who was chosen as Grand Khān in 1251. A Mongol army led by Möngke’s brother, Hülāgū, invaded Iraq, capturing Baghdad in 1258. In 1260, Kublai succeeded Möngke, and settled at Beijing. In 1279, he conquered all of China, putting an end to the state of the Southern Song. At the same time, the Mongol Empire split into various entities, sometimes rivals to one another (these were the Golden Horde in Russia, the khānate of Djaghatai in Central Asia [its name derives from the name of the second son of Genghis Khān], and the Ilkhānid state in western Asia).

The Mongol threat to southern China following the demise of the Jin was of crucial importance, both for this region and for the entire world-system. It forced the Song to augment their military expenses tremendously, and this led to an excessive issuance of paper money, and of debased coins. Moreover, the state suffered from a plethora and inefficient administration. These processes largely explain the economic decline seen at the end of the Song period. Restrictions placed on the exporting of copper coins prompted illegal trade with countries overseas; trade was reduced at the same time. In the countryside, higher taxes and the extension of large estates exacerbated social tensions, which explains migrations to the north and the fall of the Song to the Mongols in 1277; the reforms enacted by Jiao Sidao (1263–1275) came too late. The control of China by the Mongols halted the “proto-capitalistic” path which China had begun to tread. While pursuing a policy conducive to improved trading conditions, the Mongol Yuan dynasty, founded by Kublai, would control the economy and curtail freedoms for the Chinese population; in contrast, foreigners – often Muslims – enjoyed privileged administrative positions alongside the Mongol nobility.

The Yuan made attempts to develop ceramic production with the manufacture of blue-and-white porcelain, as well as cotton cultivation and a textile industry. However, exploitation of the peasants (especially in the south), increasing social inequalities, and a corrupt administration would heighten existing domestic tensions. The excessive issuance of paper money, which was no longer convertible from 1270 onward due to shrinking silver reserves, was also a major source of economic disorder (it was forbidden to use precious metals in trade; although this ban was not heavily enforced). The Chinese population appears to have been in decline, due to massacres initially perpetrated by the Mongols. Nevertheless, the Yuan state remained active in external

exchanges, first militarily, with its unsuccessful attempts to invade Japan and Java,³⁷ and also in terrestrial and maritime trade networks, by supporting a Chinese and more significantly a foreign merchant class. As had been the case during the Southern Song period, many Chinese settled in Southeast Asia and India.

In the west, the capture of Baghdad in 1258 temporarily threw western Asian networks into disarray, a situation which worked in favor of maritime traffic via the Red Sea; however, the Ilkhānid power now installed in Persia and Mesopotamia tried to break Egypt's monopoly over trade between the Indian Ocean and the Mediterranean, by initiating relations with the Franks, in particular. While the Persian Gulf regained a significant amount of activity, the Red Sea remained the major axis of maritime commerce.

Under the reign of the mamluks, who succeeded the Ayyūbids in Egypt in 1250 after stopping the Mongol advance, the *kārimī* played a preeminent role in trade, by relying upon Yemen, which was independent under the Rasūlid dynasty. The *kārimī* traveled to Yemen in order to acquire products from the Orient, brought in by Indian, Persian, or Yemeni merchants. Yemen took advantage of the development of Mamluk Egypt and of the Delhi sultanate, extending its hold over the networks, through a policy of “shared sovereignty” with Egypt (Vallet 2010b: 295). Yemeni influence was felt in the Swahili cities of East Africa and as far as Madagascan ports such as Mahilaka. In the Horn of Africa, trade routes linked the coast to an Ethiopian kingdom ruled by the Solomonic dynasty, established around 1270. This new dynasty “based its claim to legitimacy on direct descent from Aksumite royalty and ultimately from Solomon and the Queen of Sheba, [and] the propaganda which accompanied the change proved extraordinarily successful” (Phillipson, 2012: 228). This kingdom expanded at the expense of smaller Muslim neighboring states (Damot and Hadiya, in the south, and Ifat, further east). This was the case in particular under the reign of King Amda Tsiyon (1312–1342), who tried to control routes leading to the port of Zaylā'. Some of the territories conquered provided gold and ivory, which were exported along maritime routes. Coins and textiles have been retrieved, attesting to contacts with the Byzantine Empire. This increased power of the Ethiopian kingdom coincided with a revival of the Ethiopian Church – which found itself in a paradoxical situation: its “head was a Metropolitan appointed by the Coptic Patriarch of Alexandria, the subject of a Muslim state” (Fauvelle-Aymar 2013: 271).³⁸

The Mongol domination and the routes of Inner Asia fostered the travels of merchants from Europe and western Asia to China; they also triggered the westward movement of

³⁷ Writing about the Inner Asian conquests, Lieberman correctly distinguishes between “the Protected Zone and the Exposed Zone” (2009: 92). The protected zone included Japan, insular Southeast Asia, a large part of mainland Southeast Asia, and western Europe. “Protection” came from various geographical data (isolation, diseases, and limited pasture).

³⁸ During the fourteenth century, “Abyssinian Muslims took advantage of the sending of a Christian embassy to Egypt to present their grievances regarding actions by the Christians of Ethiopia” (Fauvelle-Aymar 2013: 271).

Chinese and the spread of new techniques. The concepts behind printing,³⁹ the spinning wheel,⁴⁰ iron smelting,⁴¹ gunpowder, rockets, cannons,⁴² a postal service using relay horses,⁴³ all arrived in Europe during the thirteenth and the fourteenth centuries (conversely, the technique known as “*cloisonné*” was introduced into China from the

³⁹ Xylography appeared during the first half of the fourteenth century, before Gutenberg developed a printing press using movable type. The printing process is already mentioned as early as the thirteenth century in Poland and Hungary (Hobson 2004: 185). The adoption of movable type for the Uighur script at Turfan in Central Asia around 1300 may have been a step linking techniques used in China and in Europe. Printing is lauded by the Persian Banākātī c. 1300 (Needham 1974: 65–66).

⁴⁰ The spinning wheel may have been introduced into Europe (along with other innovations in the textile industry) by Italians who sojourned in China during the Mongol period (Temple 2002: 120) (Hobson [2004: 128], however, suggests an introduction via Muslim Spain). According to I. Habib (1985) the spinning wheel was present in the Muslim world as early as the twelfth century, and A. Pacey (1990: 24) points out the possibility of independent inventions in China and in the Muslim world. Mention is made of the spinning wheel at Speyer (Germany) in 1280. In 1372, a man from Lucca introduced a hydraulic reeling machine for winding silk at Bologna (*molino bolognese*); it was clearly inspired by Chinese models, and was “the prototype for all subsequent developments in powered textile machinery” during the seventeenth–eighteenth century (Adshead 1995: 160).

⁴¹ The first blast furnaces had appeared by 1380 in the lower Rhine and in the Alpine region. This said, P. T. Craddock (2003: 252) believes that blast furnaces appeared at the end of the first millennium in southern Germany and were an independent invention, along with the production of cast iron and later decarburization, a process probably known in the Muslim world at the end of the first millennium.

⁴² In 1267, Roger Bacon alludes to gunpowder; he was perhaps informed by the Franciscan William of Rubruck, who brought gunpowder back to England in 1256. According to a Chinese text, a Mongol named Chi Wu Wen went to Europe carrying firearms; other merchants of various origins probably carried this kind of merchandise as well. After 1260, in addition to the merchants, many foreigners worked in China in service to the Mongol state. “Tradition maintains that the Mongols used firearms at the battle of Sajo in Hungary in 1241” (Gernet 2002: 312) (gunpowder, in some kind of device; chronicles speak of a “flying dragon”). The Muslims used gunpowder against the Crusaders in 1249 and, according to Ibn Khaldūn, Sultan Abū Yūsuf used gunpowder during the siege of Sijilmāsa in 1274 (Partington 1999: 191). Al-Ḥasan al-Rammāh’s work (Syria, c. 1280) mentions “the purification of saltpetre by treatment of the solution with wood ashes and crystallization,” as well as fireworks, but “it does not mention the use of gunpowder as a propellant” (Partington 1999: 201–202). Note that al-Rammāh calls rockets “arrows of China.” In contrast, Muslim forces used explosives in 1292 during the siege of Acre (Ponting 2007), and a St. Petersburg Arabic manuscript – dated to the first half of the fourteenth century – describes the use of a gun (Partington 1999: 204). In 1324, “the sultan of Granada had ‘cannons’ which appear to have been true guns” (Ponting 2007). Ibn Khaldūn mentions the use of cannons in Cairo in 1366 (Partington 1999: 195). In Europe, the first depiction of a (bottle-shaped) bombard, throwing arrows, dates back to 1327 (in a manuscript by Walter de Milemete). This type of weapon, described in Chinese texts, was soon employed in Sweden, but unknown in the Muslim world: it was therefore introduced into Europe via a northern route (via Novgorod and the Baltic Sea) (Pacey 1990: 48, 49, fig. 15). Fire lances, however, were used by Muslim armies by 1260 (Pacey 1990: 47). Produced as early as the first half of the fourteenth century in Europe, cannons are often said to have resulted from experiments supposedly carried out by the German monk Berthold Schwarz, but Berthold is a legendary figure. See Partington 1999: 91ff., Needham *et al.* 1987: 51, and Temple 2002: 245. A cannon is mentioned in Florence in 1326, and cannons were used at Cambrai in 1339 (Partington 1999: 101–102). The English probably used a few guns at the Battle of Crécy in 1346 (Partington 1999: 107). “Iron cannon were made in England as early as 1369–1371” (Partington 1999: 110). Cannons are mentioned in Cahors and Toulouse in 1345 (Partington 1999: 104). Firearms appeared in Germany around 1330 (Partington 1999: 120).

⁴³ Adopted by the Mamluk Baybars in Egypt, a postal service was introduced in Milan in 1386 (Adshead 2004: 183). This type of service had already been developed by the Chinese Tang Empire. Moreover, it may be that advances in cartography in the West – where maps became travel guides – from the thirteenth century onward arose from Chinese influences via the Mongol regions. This evolution was relatively free

Byzantine world).⁴⁴ The Mongols encouraged commercial and cultural exchanges by supporting trade partners – forming associations of merchants known as *ortaq*, a type of merchant guild – who were primarily Christians and Manichean Uighurs, and later Muslims from Transoxiana. In the Mongol Empire, religious tolerance was the rule; this was a technique of power already observed in the Kushan and Tang empires. The *ortaq* organized caravans by borrowing capital; moreover, they were placed in charge of collecting taxes, for example in northern China. The Mongol expansion led to a huge westward inflow of silver, minted or not, from Central Asia and China. Paradoxically, in 1250, only one city that was linked to a silk road – or rather a more northerly steppe route – was listed by Chandler among the twenty-five largest cities in the world; this was Sarai, north of the Caspian Sea (ranked ninth). Most international trade was operated along sea routes. “Impressive urban growth occurred along coastal China, and around the Mediterranean, especially in Italy” (Bosworth 1995: 219).⁴⁵

Europe was also in (indirect) contact with China via the Muslim world, which brought its own technical developments. The use of the windmill, invented in Persia around the eighth century, spread during the thirteenth century.⁴⁶ An Italian paper industry also began to develop at this time.⁴⁷ Ships with several masts and a lateen sail of the Arabian type on the mizzen mast appeared, a combination that would develop further during the fifteenth century.⁴⁸ The ballastella (or “Jacob’s staff”), used for measuring the height of a star, is said to have been “invented” by the Jewish scholar Levi ben Gershon by 1342. Its development was certainly influenced by Arabo-Persian instruments such as the *khashaba* mentioned by Ibn Mājid; however, the origin of the Jacob’s staff actually goes back as far as Antiquity (see Volume 1). The Portuguese term *balestrilha* derives from the Persian *bālā*, “height” and *astar*, “star.” The Chinese text *Guang Yutu* (1320) describes a similar instrument. In Venice, the glass industry benefited from technical input from Syria in 1277. The first weight-driven clocks

of Muslim influence, although the Muslim world did know of navigational texts, but in this case there was a split between urban scholars and the worlds of sailors and merchants (E. Vallet, and G. Ducatez, p.c.).

⁴⁴ “In *Novum organum* (1620), Francis Bacon famously claimed that the three most important world discoveries were printing, gunpowder, and the compass. Strikingly, all three were invented in China” (Hobson 2004: 57).

⁴⁵ Bosworth wonders whether “the Mongol Empire was not actually a futile attempt to revitalize the moribund Silk Roads” during a period of decline and restructuring of the trade networks along maritime routes (1995: 220).

⁴⁶ Mazoyer and Roudart 1998: 298. Europe, however, developed a new type of mill.

⁴⁷ The Arabs created the first paper manufactures in Europe, in Sicily around 1000 and in Spain around 1150. On the spread of paper manufacturing techniques, see Pacey, 1990: 42, and Bloom 2001. In Europe as in western Asia, the “process of pounding fibers into pulp was carried out mechanically, with a water-wheel driving a cam-shaft to operate trip hammers” (Pacey 1990: 43).

⁴⁸ Needham *et al.* 1971: 609–610. The lateen sail was signaled in the Mediterranean during the ninth century (in a Byzantine manuscript containing sermons by St. Gregory Nazianzen, dating to 880) (Needham *et al.* 1971; Adshead 2004: 177); its depiction on a Greek tomb relief of the second or third century is most uncertain (Needham *et al.* 1971). The western Indian Ocean used other types of sail; the sails featured in a manuscript by al-Harīrī dated to 1237, on a fresco at Tirupputaimarutur (sixteenth century) and in the Miller Atlas attributed to Lopo Homem (1519) appear to be square or trapezoidal, as are those mentioned by Ibn Mājid and G. Correa (Manguin 1985a: 8). A “square [rectangular] canted sail, without boom” thus appears to have been more common than the lateen sail (Manguin 1985a: 8).

built in Europe by 1300 show many borrowings from Islamic devices,⁴⁹ and perhaps from China, for the use of the escapement device.

The appearance of mechanical clocks on churches and town halls by the late thirteenth century in Europe signified the value now attributed to time and ongoing social transformations. “Time became a rationalized commodity, and the clock an increasingly important instrument for controlling labor” (Mielants 2007: 21). The growing significance of long-distance trade went along with a growing division of labor, according to Smithian dynamics. Economic progress first became significant in the Mediterranean, where Venice, which recovered a large part of Byzantine commerce, controlled two-thirds of the western European spice market, then in full expansion. From 1250 onward, Venice was able to deal with the powers commanding three major routes: Central Asia, the Persian Gulf, and the Red Sea (Abu-Lughod 1989). While Venetian merchants forged relationships with the Mongols,⁵⁰ the main suppliers to Venice were the Mamluks of Egypt, to whom the Italians sold slaves. This dual relationship gave Venice a quasi-monopoly over exotic goods imported from Asia. A sizeable textile industry flourished in Italy, particularly at Lucca (silk), Florence (wool), and Venice: these textile industries supplied the goods for export. The cities encouraged skilled craftsmen to immigrate, while at the same time preventing them from leaving (we will continue to find such attempts at building more or less monopolistic positions, in both the production sector and trade) (Mielants 2007: 29). The Maghreb states, divided up after the demise and fall of the Almohads (1269), opened their ports to Christian merchants attracted by western Sudanese gold, which was carried along trans-Saharan routes.⁵¹ “The European production of precious metals was boosted by the need to pay for oriental goods, especially Chinese products, which were traded through Venice” (Norel 2007). Gold and silver from the European states were exported to the Levant and to Egypt, and further to India. Egypt maintained a positive trade balance with Europe until the end of the fourteenth century.

In northern Europe, industry and trade also expanded, from England to the Baltic Sea, making use of the ports of Bruges and the Hanseatic League, where Lübeck rose to prominence.⁵² Beyond the Baltic Sea, routes led to Novgorod. As early as the late eleventh century, Flanders standardized its textile production, “intended for large-scale export,” accompanied by “a far-reaching division of labor” (Mielants 2007: 21, 25). The putting-out system (German *Verlagssystem*) probably appeared in Europe at this time (Braudel 1979, III: 276). Italy and the northern regions met at the Champagne

⁴⁹ Pacey 1990: 43. A compilation from Arabic authors, written at the court of the king of Spain Alfonso X in 1276, includes “a design for a weight-driven clock regulated by a hollow wheel containing mercury”; it probably borrows from al-Muradi (Pacey 1990: 43). Exeter Cathedral already had a clock in 1284, as did Canterbury Cathedral in 1292.

⁵⁰ At that time, Venice was seen as the crossroads of Europe and Asia (McNeill 1974: 175).

⁵¹ A decisive fact, as F. Braudel points out (1946: 11), was control over sea routes by the Christians between Africa and the Levant, which allowed them to “force the gates of northern Africa.” As early as 1252, Florence struck the first guilder, which would become an international currency. This minting followed the financing, by a Genoese bank, of *commendae* to be sent to a port in Morocco, where gold habitually arrived.

⁵² Bruges belonged to two hansas, which were professional associations of merchants: one hansa included the Flemish cities and London; the other united the northern cities.

fairs (thirteenth century); they were connected by sea from the late thirteenth century onward (Braudel 1979, 111: 78–94). French and English towns also grew in size.⁵³ An inter-city-state system was thus in place during the thirteenth century; this was the cradle of European capitalism. The absence of a similar system in China, in the Islamic world, and in South India partly explains the “divergence” between Europe and the rest of the Ancient World (Mielants 2007: 32ff.). Public interventions to support innovation, seen in Italy during the thirteenth century (Arnoux 2001), were not uniquely European: they were a constant in Chinese governmentality. The rapid development of European proto-capitalism occurred within the context of a triple crisis involving feudalism, the state, and the Church, a crisis clearly visible during the thirteenth and even more so during the fourteenth century (Wallerstein 1999c).

Moreover, especially during the twelfth century, translations from the Arabic (from ancient Greek authors and scholars of the Muslim world) brought about an intellectual movement in Europe that was marked during the thirteenth century by the creation of universities enjoying a certain amount of autonomy, unlike the madrasas of the Muslim world;⁵⁴ this development was linked to the growth of cities and guilds. The Muslim world did not allow the development of autonomous institutions similar to the European guilds or universities, or that of self-governed cities (except along its margins, in Southeast Asia, sub-Saharan [Hausa country] Africa and East Africa) (see Hansen 2000c: 603). While the places where Islam was taught did influence the creation of the university of Salerno, the European universities were not simply transpositions of Muslim schools (unlike what Goody has suggested [2007: 232]). It is true, however, that the concept of humanism which arose during the Renaissance was indebted to currents developed within the Muslim world (2007: 238).

The first European university following Salerno appeared at Bologna during the eleventh century; it was already under the “protection” of Emperor Frederick Barbarossa in 1155. The movement was ultimately supported by the pope, who “introduced the system of the *licentia docendi*,” or “licence to teach” (Charle and Verger 2007: 12). At Bologna, universities were created based on initiatives by student organizations. At Paris (prior to 1200) and at Oxford (around 1220), universities were created by associations of teachers, joining forces. Canon Law teaching in the universities proved to be a “crucial instrument for the strengthening of the Church institution and the assertion of pontifical primacy” (Charle and Verger 2007: 27–28). In addition, Frederick II, ruler of the Holy Roman Empire and king of Sicily, who was the grandson of Frederick Barbarossa, founded the university of Naples in 1224, and attracted Muslim and Jewish scholars to his court. At the same time, he set up a centralized Italian state.

For P.-P. Rey, Frederick II, who opposed the papacy, truly provided the impetus in Europe for all of the following: the institutionalization of universities as centers for the production and transmission of knowledge; the practice of *raison d'état* as technique of government associated

⁵³ While I. Wallerstein has greatly exaggerated the difficulties of Europe, writing of an “economic decline” from 1250 onward (1999c: 51), it is true that some regions saw their populations decline.

⁵⁴ This is an essential difference, which E. Burke III (2009a) fails to recognize, although it is true that European universities were generally under the control of the Church. Nor did China have autonomous universities; what is more, the study of sciences in China was negligible in official education.

with the development of capitalism; the spread of industrial technologies linked to textile production in the Bologna region and northern Italy; and . . . the dissemination of Averroism and works by Greek, Muslim and Jewish philosophers, physicians and scholars. By reconstituting this “route of universalist rationality” from the Tahert imamate to the kingdom of Sicily via Ummayyad Andalusia, P.-P. Rey thus suggests that a common cultural area might have formed in Europe and in the Mediterranean world during the xiith century that transcended Christian and Muslim differences, had this German and Sicilian attempt not been crushed by the joint fury of the popes and the Saxon and Anglo-Saxon princes during the Mongol globalization process. (Berger 2010)⁵⁵

Thomas Aquinas (1224–1274), the nephew of the First Minister of Frederick II, produced a synthesis between faith and Aristotelian analytical logic at the time;⁵⁶ he distinguished between the temporal and the spiritual, while acknowledging state autonomy. In England, scholars from Oxford emphasized the value of experimentation in order to discover new facts about nature (they appear to have been the true founders of the “experimental method,” which owes just as much to the Muslim school of the Mu‘tazilis and to scholars such as al-Razī and Ibn Rushd).⁵⁷ In any event, McClellan and Dorn are correct in pointing out that “the medieval scientific accomplishment laid the institutional and intellectual foundations for further developments during the Scientific Revolution of the sixteenth and eighteenth centuries” (1999: 191).

Through commercial and cultural exchanges and confrontations, knowledge and techniques were primarily transmitted to the Asian continent and to northern Africa. Everywhere, “the Mongol century was a period of reassessment of knowledge about the world” (Vallet 2010a: 28). At the same time – and this marked a major difference from Europe – “the Mongolian explosion intensified orthodoxy

⁵⁵ Frederick II’s brilliant reign was marked by his opposition to the papacy, which excommunicated him twice. Northern Italy was affected by a civil war between the Guelphs, who supported the pope, and the Ghibelines, who supported the emperor. Frederick II was finally deposed by Pope Innocent IV in 1245 at the Council of Lyon. Formed in 1225 under papal patronage, a Lombard league defeated Frederick II in 1249 at Fossalta. Descendants of the emperor would be eliminated from the political sphere. Scholars such as Roger of Palma later left the ancient kingdom of Sicily for Montpellier.

⁵⁶ His doctrine tried to conciliate faith and reason, without going as far as the disciples of Averroes, who affirmed the primacy of reason and believed that God himself was bound by the laws of nature. In 1277, however, the bishop of Paris condemned the study of the “219 faults of Aristotle” and “threatened to excommunicate those who taught them.” Disciples of Averroes fled to northern Italy. Paradoxically, “these threats obliged the scholars to seek other answers than in Aristotle.” Thus J. Buridan (1297–1358) and N. Oresme (1320–1382) were led to propose a rotation of the Earth on its axis (McClellan and Dorn 1999: 185–188). Widespread during the fourteenth century, thomism influenced the formation of the “spirit of capitalism” (Sombart 1926: 288). William of Ockham (1285–1347), in turn, the bearer of a more individualist modernity, affirmed a separation between faith and reason, and expressed some theological skepticism. A precursor of secularization, Ockham wrote pamphlets in opposition to Pope John XXII which led to his excommunication. His works would influence the young Luther.

⁵⁷ Robert Grosseteste (1170–1253) and his pupil Roger Bacon (1214–1294) were the most famous of the English scholars. Bacon’s theories were condemned in 1277 and he was imprisoned until 1292. The French physicist Pierre de Maricourt (Petrus Peregrinus), Bacon’s teacher, ascribed to this current of thought. He describes the compass in his *Lettre sur le magnétisme* (1269), which may partly reflect the transfer of knowledge by the Franciscan missions in Central Asia.

in Islam and China.”⁵⁸ The use of gunpowder was known in the Muslim world during the thirteenth century.⁵⁹ Yuan China employed Muslim experts in hydraulics,⁶⁰ and took advantage of the mathematical knowledge brought by Persians (Needham and Wang Ling 1956, 11: 49). An innovative book on mechanical engineering written by al-Jazarī (1206) may have benefited from technical Chinese influences.⁶¹ The astronomical observatory at Marāgha, created during the second half of the thirteenth century, reveals mutual influences between Muslim and Chinese views on astronomy. The observatory would later be closed in 1320, however, within an atmosphere of increased clerical conservatism. Printing appeared in Egypt during the fourteenth century, but was later forbidden by Islam. The ban on teaching “foreign sciences” (mainly ancient Greek philosophy and science) in the madrasas was another example of the conservative religious currents’ distrust of ways of thinking considered potentially disruptive.

While the Mongol conquest accelerated thirteenth-century transformations throughout the world-system, the roots of these changes grew primarily out of the long-distance trade in South Asia, where most of the Indian Ocean became a Muslim sphere (Lombard 1990, 11: 31–32). The thirteenth century was marked by a second period of Islamic expansion, in northern India (like the Mamluk state in Egypt, the Delhi sultanate, which formed at the end of the twelfth century, provided a refuge from the Mongols [Gaborieau 1995a: 437]); in South India, where the Chola thalassocracy disintegrated; and in Southeast Asia. The story of Ibn Battūta’s travels clearly shows that these cosmopolitan Muslim networks extended as far as China.⁶² The precise purpose of the *Rihla* (“Journey”) by Ibn Battūta was to affirm the presence of Islam across most of the Ancient World. Ibn Battūta offers a good example at Sijilmāsa (Morocco) where “he stayed in the house of a legal scholar whose brother lived in China” (Fauvelle-Aymar 2013: 148). The two brothers had thus settled along the gold and silk roads. Nonetheless, we cannot contemplate the existence of a “Muslim world-economy”; Wink (1990) has correctly been criticized on this point by various authors (see Subrahmanyam 1995: 754): Islam was not a monolithic world, but rather developed through various, oft-competing currents. Islam did, however, promote an increase in trade, as did Buddhism – especially in its Theravāda form (Subrahmanyam 1995: 755).

As a major power in southern Asia, the Delhi sultanate attempted to develop agriculture and industrial production and to take hold of their surpluses. But the

⁵⁸ Adshead 1995: 162. It also led to the development of Sufi currents in response to the destruction of the material world.

⁵⁹ And not during the twelfth century; al-Ḥasan al-Rammāh (c. 1280) seems to be the first author to mention gunpowder. He probably derived his knowledge from Chinese sources. See Partington 1999: 197ff. and above. Al-Baytār, a Spanish Arab who lived in Egypt, c. 1248, mentions saltpeter under the name *thalj al-ṣīn*, “Chinese snow” (Partington 1999: 22).

⁶⁰ A Chinese work of 1313, the *Nong shu*, mentions the use of a vertical wheel (for driving textile machines) and the noria (Needham 1974: 70).

⁶¹ Thus in the application of the rod/crank system, which was already known in the Roman world (see Volume 1 on sawmill features at Hierapolis). On al-Jazarī, see below.

⁶² The maps of the Ancient World that are presented for each cycle, showing the cores of the world-system, fail to express the functioning of the system in its entirety since they can show only transnational networks. The cores featured on the maps are economically dominant regions and do not show areas that are politically controlled.

sultanate's administrative techniques could not compare with the efficiency of the Chinese empires in this domain, despite efforts by the Delhi sultans to set up a centralized administration, at least in the core of the empire. The creation of the sultanate, however, did lead to increased trade throughout the Indian Ocean, especially in its eastern part. Islam advanced in the Insulindian archipelago, where Sriwijaya went into decline and at last disappeared, for the benefit of the first merchant sultanates; this process would come to characterize Indonesian Islam. More importantly, the fall of Sriwijaya benefited Java. Trade development accompanied the rise of the kingdom of Mojopahit, founded in eastern Java. Well located along the spice route, Mojopahit combined intensive wet rice cultivation with progress in crafts and trade. Moreover, during the Yuan period, the Chinese increased their presence in Southeast Asia and in the Indian Ocean, an expansion partly based on Muslim networks.

At the beginning of the fourteenth century, the growth phase of the world-system reached its peak, with China remaining its dominant core (note that the period between 1300 and the 1320s saw a new phase of climate warming throughout the northern hemisphere) (Mann *et al.* 1999; Esper *et al.* 2002). It is no coincidence that the travels of Marco Polo and Ibn Battūta had the same destination, “the Middle Kingdom”: the widespread sense of living at the center of the world was justified in the case of the Chinese. Trade was conducted via both sea and land. The Franciscan Odoric of Pordenone, who arrived in China by sea, remained in the empire for three years (1323–1326) before returning via Central Asian routes. He observed that many Venetians sojourned at Hangzhou. He expressed surprise at “the size and the wealth [of this city], the standard of its bourgeois, the quality of its postal service, and the multiplicity of its suburbs” (Boothroyd and D  trie 1992: 65–71; Norel 2009b). B. Pegolotti, a Florentine merchant belonging to the Bardi firm, describes the trade routes followed in the Mongol territories of the Golden Horde, as well as the products available in trade centers such as Byzantium. “The route from Tana [at the mouth of the Don River] to Cathay [China],” writes Pegolotti, “is perfectly safe, whether by day or by night.”⁶³ “Travel costs and customs duties for a caravan might amount to some 3,500 florins, while the merchandise could be sold for 25,000 florins” (Rossabi 1990: 356; Findlay and O’Rourke 2007: 107). The Golden Horde was at its peak under Kh  n Uzbek’s reign (1313–1341). It developed close links with Egypt (to which it provided slaves) and sent tributes to the Yuan during the 1330s. Uzbek maintained friendly relations with the Genoese and the Venetians. Trade benefited from the “Mongol peace”⁶⁴ and from the

⁶³ In his *Pratica della Mercatura*, Pegolotti indicates trade routes, and gives the amounts of money to be spent in a certain number of places; weights and measures; amounts of taxes; and sales conditions. Textiles were always major products for importation, as shown by the appearance in Europe during the fourteenth century of the words “satin” (Arabic *zaituni*, from the name of the Chinese port Zaitun), “taffeta” (Persian *taft  *, “textile”), and “organza” (Italian *organzino*, “silk thread,” from the name of the town of Urgench). Flax was sold at Urgench against silver ingots; these ingots were exchanged in China for paper money which allowed the purchaser to acquire silk. The taste of the Mongol aristocracy for furs influenced the European elites (Adshead 2004: 179).

⁶⁴ The peace was only relative, because the Golden Horde conducted military campaigns against the Ilkh  ns, in 1319, 1325, and 1335, and in Thrace, against Byzantium and Serbia, in 1324, and 1337. Merchant exchanges continued, however, even during these periods of disorder. Uzbek Kh  n at last married a daughter of the Byzantine emperor Andronikos III.

reconciliation of the Ilkhāns from Persia with the Muslim world (leading to a peace treaty in 1323 between the Ilkhān Abū Saʿid and the Mamluk An-Nāṣir Muḥammad). The Mongol emperors of China and the Mamluk rulers of Egypt exchanged ambassadors. A Chinese embassy also arrived in Avignon in 1338; the pope responded by sending Franciscans, among them Giovanni dei Marignolli.⁶⁵ The price of Chinese silk in Italy during this period of Pax Mongolica was only three times its price in China, demonstrating the efficiency and intensity of trade in this commodity (Lopez 1987: 353). Silks from Transoxiana and Iran, such as the golden brocades called *nasij*, known as “Tartar textiles,” were also present in Italian markets (Liu 2010: 123).

The Islamic expansion that had begun in the thirteenth century continued.⁶⁶ In India, the Delhi sultanate controlled much of the peninsula at the beginning of the fourteenth century. “The center of gravity of economic life in the Muslim world shifted southward” (Gaborieau 1995a: 436). Via merchant networks, Islam reinforced its presence in insular Southeast Asia, in the merchant sultanates of Sumatra, and in the cosmopolitan cities along Java’s northern coast. This island was then preeminent in this region of the world, under the rule of the king of Mojopahit. Muslim networks also developed in Mongol China. In East Africa, Islam was now present in all the towns along the Swahili coast. Kilwa reached its peak at this time; its wealth was linked to the flourishing of the Great Zimbabwe culture. Further north, Mogadishu was the only city other than Kilwa which struck money during the fourteenth century. The cultural developments of the Swahili coast extended to the Comoros and northern Madagascar, which welcomed Swahili influences – with a slight lag – and developed simplified architectural forms.

In Europe during the thirteenth and early fourteenth centuries, several phenomena – the Crusades; fights between feudal lords and peasants; the emergence of a merchant bourgeoisie; and the (relative) revival of states⁶⁷ on national bases (France, England, Portugal, and Spain) – all helped dislocate the feudal system; at the same time, these events triggered the decline of the great abbeys and weakened papal authority. Expanding trade and cultural exchanges with western Asia and Egypt benefited Italian cities, freed from imperial tutelage following Frederick II’s death in 1250. Expanding markets became the driving force behind economic progress. Trade developed with Maghreb, where Italians sold textiles, copper, beads, wine, and grain, exchanging these against gold from Ghana and later from Mali. The first issuances of gold coins by Genoa and Florence in 1252 “crowned Europe’s recovery” (Vilar 1974: 43) (above). The flourishing of a form of private “capitalism” was helped along by borrowings from the Muslim world, such as the credit note, which would later become

⁶⁵ Giovanni dei Marignolli replaced the archbishop John of Montecorvino at Beijing. Marignolli left Europe in 1338 and traveled to China via the Silk Roads of Central Asia; he would return by sea fifteen years later. The missions toward the Orient would stop during the fourteenth century, due to the disaggregation of the Ilkhānid and Yuan powers, and to the situation prevailing in Europe.

⁶⁶ On this point, it appears difficult to accept J. Gernet’s statement: “The Mongol occupation led to the decline of the Islamic world” (2002: 347). This decline involved Mesopotamia and Iran, but certainly not Egypt or South Asia.

⁶⁷ The state was in crisis later during the fourteenth century. True state development would occur from 1450 onward.

the bill of exchange, and technical innovations such as the double-entry bookkeeping system, in northern Italy, around 1300.^{68,69}

The association of the textile industry with banking activities laid the economic foundation for the Renaissance (Goody 2007: 90). Put into circulation by Italian merchant bankers, the bill of exchange marked “the invention of capitalism” in Europe (Aglietta and Orléan 2002: 141);⁷⁰ this allowed financial capitalism to develop rapidly as of the fourteenth century, with “the expansion of circulating debt notes which escaped the control of public authority” (Aglietta 2009). The institution of abstract units of account (the *livre tournois* in France, the pound sterling in England), with no metal basis, was another innovation of the thirteenth century. “The conjunction of these two elements [abstract units of account, bills of exchange] amounted to an international dualist monetary system which regulated the first phase of capitalistic expansion” in Europe (Aglietta 2009). Growth in production and trade appeared to be inseparable from that of banking activity, as shown in Florence and Milan. In 1338, Florence was home to eighty banking firms. The firm of Bardi had more than thirty delegations in Europe and in the Levant. Florence had “six schools teaching numeracy, with 1,200 young boys” (Sombart 1926: 157). The fairs of Champagne disappeared: as of the late thirteenth century, Genoese and Venetian rivals were circumventing western Europe in order to come into contact with the industrial world of Flanders,⁷¹ where vessels

⁶⁸ The archives of Rinierie Fini & Brothers (1296–1305), Florentine bankers, and Farolfi and Co. (1299–1300), a firm of Florentine merchants, show double-entry bookkeeping. Documents from a Florentine bank dated to 1211 already contain some elements of this type of accounting. Similar documents are later found at Genoa. It is possible that these Italian “innovations” may in fact have been borrowed from the Muslim world. Both W. Sombart and M. Weber attached the utmost importance (probably exaggerated) to this innovation of double-entry bookkeeping in the emergence of rational modern capitalism. Capitalism, for Weber, “did not result [merely] from the desire to achieve maximum profit; this desire led only to ‘irrational economic results’” (Bruhns 1998: 50).

⁶⁹ Political collapse in Italy and Germany during the thirteenth century allowed some cities to form “autonomous universes” (Braudel 1979, 1: 450). The political area of the medieval system, with the balance of power between pope and emperor, worked in favor of the emergence of the capitalist enclaves of the city-states (Arrighi 1994: 37), unlike the case in France, England, and Castile, where the revival of the territorial state “restricted the cities.” For some authors, however, kingship in Europe, generally speaking, may have “looked kindly upon traders in order to develop merchant capital in the cities, which was a source of revenues for the state, [also a source for luxury goods], and a means of undermining the grip of the seigneurs” (Norel 2004: 151). “This idea of complicity between the merchant city and kingship against the seigneurs,” notes Norel, “is already present in Adam Smith’s work”; it can later be found in Weber’s and Pirenne’s writings. Norel points out that “rights of property began to be better protected as of the end of the thirteenth century” (2004: 156). The Italian cities and those of the Hanseatic League, however, “innovated [in Europe at least]: they made long-distance trade an exceptional source for the accumulation of capital, by controlling or creating an international division of labor” (2004: 160). In northern Africa (and in the Muslim world in general), merchant elites emerged, but they failed to convert their economic prosperity into political power (Mielants 2007: 141).

⁷⁰ The periodic clearing – between debts and receivables – of bills of exchange in the fair towns laid the groundwork for “the first organization of an international money market” (Mielants 2007: 143). The spread of the bill of exchange during the fourteenth century founded the institution of “a homogeneous private banking network at the European level” (Aglietta 2009). The growth of these instruments of credit may have influenced the price increases observed during the 1320s.

⁷¹ Technical progress (the spinning wheel; the treadle loom) stimulated the textile industry in Flanders. Stages of production were divided among various workshops, forming a “chain of production” (Norel

from the trading cities of the Hanseatic League also docked. Genoese ships were arriving at Bruges as early as 1277. At this time, Genoa was trading with an area stretching from Morocco to northern Europe. In 1309, a Bourse was created at Bruges, and the city became a major financial market, visited by Venetians, Florentines and Genoese. Bruges housed the first-known Portuguese *feitoria* (“outpost”) in 1386. Genoa competed with Venice in the eastern Mediterranean and, in the Black Sea, helped the Greeks retake Byzantium,⁷² and created an outpost at Caffa in 1261. The Genoese controlled the economy of the Byzantine Empire of the Palaiologi, and were active in Asian and African networks, particularly in the trade of Circassian slaves bound for Egypt. Genoan “revenues from taxes on trade turnover rose more than fourfold from 1274 to 1293” (Findlay and O’Rourke 2007: 94). In 1293, “Genoa’s sea trade was three times the entire revenue of the Kingdom of France” (Lopez 1976: 94; Arrighi 1994: 91). It turned “the Black Sea into an interface between the routes of Asia and the Danube [valley]” (Bouchon 2004: 21). Genoese merchants traded in Bursa, which was the silk world market, and traveled to Tabriz, Azov, Hormuz, and as far as India. Giovanni dei Marignolli signals a Genoese community at Zayton (Quanzhou). At this time, Tabriz lay at the junction of major international trade routes, somewhat overshadowing Baghdad and Cairo (Inalcik and Quataert 1994: 315). Genoa also took an interest in the gold available from western Africa and even attempted to establish a direct route toward India. In 1291, the Vivaldi brothers had ships crewed and equipped by Genoese bankers; they launched an expedition aiming to circumvent Africa, but all traces of their expedition were lost between Senegal and Gambia.⁷³ As early as 1321, “a map in a book by the Venetian Marino Sanudo indicates the southern part of Africa accurately, under the shape of a peninsula”; this knowledge had probably been acquired from Arab sailors (Amilhat-Szary 2004: 59).

India thus figured in the ideas burgeoning in northern Italy from this time onward.⁷⁴ Jean de Mandeville (1300–1372), who had traveled to the Levant, wrote *Voyage autour de la terre*; in this work, he falsely claims to have reached China; in any case, in his book – a compilation based on earlier authors – he clearly shows the unity of the Afro-Eurasian area, and insists that a circumnavigation of the Ancient World was possible (see Mandeville 2004). Within the context of flourishing European industry and trade, the armaments industry was already significant: the first large-scale cannons were

2004: 176). As early as the fourteenth century, Asia exported cotton to Europe, which sold it back in the form of textiles.

⁷² Since 1204, Byzantium had been a Latin state, dominated by the Venetians. The Genoese also settled on Chios, in the Aegean Sea. The *maona di Chio e di Focea*, created in 1346, was a Genoese company with a colonial agenda, to some extent the ancestor of the Dutch East India Company (*Vereenigde Oostindische Compagnie* [VOC]); it brought together creditors of the state, which took over the colonial enterprise; the company enjoyed an usufruct on Chios, as well as commercial facilities.

⁷³ In 1312, a Genoese expedition went to search for them, and in doing so rediscovered the Canaries.

⁷⁴ Bouchon 2004: 10, 12. The Catalan cartographers “redrew the world” using data collected by merchants and travelers. “The Catalan atlas by Abraham Cresques, acquired in 1375 by the king of France Charles V, mentions . . . Cambay, in Gujarat, Mangalor, Eli and Kollam in Kerala, and Bidar in Deccan” (Bouchon 2004: 12). The first portolans (both texts and nautical maps), intended for navigation and trade, were drawn up as early as the twelfth and thirteenth centuries in the ports of the Mediterranean (Schmitt 2009: 789; Palsky 2009: 797). They, as well as the rhumb system, probably had an Arab origin (Amilhat-Szary 2004: 62).

manufactured during the 1310–1320s.⁷⁵ The growing European trade in the Mediterranean paralleled a decline in Muslim naval power between the thirteenth and sixteenth centuries, for various reasons including scarcity of wood (Mielants 2007: 136). The growing demand for gold which accompanied the issuance of new coins in southern Europe and in Egypt partially explains the emergence of the empire of Mali⁷⁶ and of the kingdom of Zimbabwe at this time (for Zimbabwe, it is likely that expanding Indian trade in East Africa also played a part). Egypt and more importantly Europe appear to have been the beneficiaries of the development of trans-Saharan trade.

A peak was reached in the 1320s. Slightly prior to 1330, activity in the world-system ran out of steam.⁷⁷ Signs of an economic slowdown were noticeable at Genoa after 1328 and at Venice as early as 1325 (Abu-Lughod 1989: 126).⁷⁸ Italy was struck by a series of poor harvests. Excessive rainfall affected western Europe between 1315 and 1321, and Europe experienced famines between 1315 and 1317 (Fagan 2004: 125; Ponting 2007: 102).⁷⁹ Agricultural and craft production declined, and trade took a downward trend all over Europe. The financial system initiated by Florence was in crisis as of 1343, when the British Crown reneged on its debt: nine great Italian banks disappeared between 1343 and 1346 (Porter 1995). Europe entered into a long period of turmoil. The Hundred Years' War thus began in 1337 between England and France.

Like Europe, other parts of the world were now affected by climate deterioration and experienced a sharp decline. Egypt saw four instances of low Nile flooding between 1334 and 1340. Domestic wars tore Yemen apart in 1333. While conflicts burst forth in Central Asia – the khānate of Djaghatai disintegrated around 1334 – the Ilkhānid state in Iran collapsed by 1335, and this region was affected by famine in 1336. Drought induced famine in northern India. It is significant that the Delhi sultanate issued devalued silver money around 1330, replacing the pure silver tanka (Digby 1982b: 98). The fiscal policy of Sultan Muḥammad ibn Tughlūq aggravated the crisis. Upheavals and repressions weakened the empire, and various regions gained independence, including the sultanate of Madurai in 1334, the sultanate of Bengal in 1338, the Hindu kingdom of Vijayanāgara in 1346, and the Bahmani sultanate in 1347.⁸⁰

⁷⁵ Cannons were produced in the Muslim world in the 1330s and in China around 1356. A. Pacey (1990: 52) writes of an arms race in Italy from 1300 onward. It was China, however, which invented the cannon during the thirteenth century (see above). The transmission of this technology may have occurred through Italian merchants living in Tabriz, or via Europeans who traveled as far as China (Hobson 2004: 187, quoting Needham *et al.* 1987).

⁷⁶ Gold ore fields were located outside Mali's territory; in Bambouk, between the Senegal and the Falémé Rivers; at the ore field of Bouré, between Upper Senegal and Upper Niger; at the ore field of Lobi, in the Upper Volta valley; and at the ore field of the Sirba valley, in Niger (Fauvelle-Aymar 2013: 160). East of the Mali Empire, a Mossi kingdom developed from the eleventh century onward.

⁷⁷ According to Bosworth (1995), urban population growth remained strong in eastern Asia until 1300, whereas in India this growth gradually decreased.

⁷⁸ Interestingly, in Venice, "the state Arsenal tripled in size in 1303 and expanded again in 1325, after which no expansions took place until 1473" (Abu-Lughod 1989: 126).

⁷⁹ "In the four years 1319–1322 some two-thirds of Europe's population of oxen died" (Ponting 2007: 103).

⁸⁰ As early as 1326, a Rajput state formed in Rajasthan, centered on Chittor.

Rainfall also diminished in South India, northern Thailand, and southern China.⁸¹ The Yuan Empire experienced growing difficulties from 1327 onward.

It was within this context of economic downturn that a bubonic plague epidemic swept through Asia and the Indian Ocean region, from China (the first epidemics were signaled in 1320 and 1321 in Yunnan, Hubei, and Henan), carried by Mongol cavaliers and by travelers along the steppe routes, as well as by ships visiting Chinese ports. The plague reached Caffa on the Black Sea in 1346, struck Egypt, Venice, and Genoa in 1347, and France and England in 1348. Plague also appeared early on in Burma, carried along the Yunnan route (McNeill 1998b). A wetter climate in part of Central Asia may have led to a multiplication of rodents and fleas and therefore the spread of the plague epidemic;⁸² in addition, this epidemic occurred within a general context of colder conditions in the northern hemisphere.⁸³ A third of the European population died in the epidemics.⁸⁴ China had only 65 million inhabitants by the late fourteenth century, as compared to 115 million at the start of the thirteenth century.⁸⁵ The world population diminished during the fourteenth century (Ponting 2007: 89).

These plague epidemics probably furthered the disaggregation of the Mongol powers, which had begun earlier. Wars between rival khanates were accompanied by a decline in trade along the Silk Roads. The second half of the fourteenth century saw

⁸¹ Brown 2001: 256; Lieberman 2003: 106; Morrison 2000; Godley 1997. Weak monsoons in the Indian Ocean appear to be linked to a more frequent occurrence of *ENSO* phenomena (Grove and Chappell 2000: 12, 14). One wonders whether the revival of pastoralism noted in Sudan during the fourteenth and fifteenth centuries (Spaulding 2000: 119), aside from the political context, was not the result of climate change. According to An and Thompson (1998: 20), at this time, China seems to have experienced a phase of moderate aridification in the north and diminishing rainfall in “semi-humid” regions. “In China, 36 years in the 14th century had exceptionally severe winters” (Lieberman 2009: 558). The years 1320–1330 were a period of low solar radiation (nadir of Wolf minimum) marked by global cooling in the Northern Hemisphere (Crowley 2000: 270–277; Burroughs 2001: 294; Esper *et al.* 2002; Lieberman 2003: 101), precisely when the world-system was entering a phase of recession. A new decrease in solar radiation occurred between 1430 and 1520 (the “Spörer minimum,” with a nadir around 1460; see below), and between 1654 and 1714. The latter period also coincided with a global phase of recession throughout the world-system (paralleling Europe’s Little Ice Age). Lieberman (2003: 106) writes of poor harvests in southeastern China and some parts of India from 1630 to 1670, and later from 1690 to 1710.

⁸² Brown 2001: 261; Brooke 2014: 389. S. Giralt *et al.* (2004) signal a moderate increase in the water level of Lake Issyk Kul, in Central Asia, from 1308 onward.

⁸³ Brown 2001: 291. The data presented by An and Thompson (1998: 20, 28), according to Gong and Hameed (1991) for a semi-arid region of China, show only a small increase in humidity during the period 1250–1300, within a rather arid 1100–1500 phase. “Semi-humid” China experienced more abundant rainfall between 1250 and 1450. It has been suggested that encounters between pastoral and sedentary populations may have created an area favorable to the appearance of the plague, which was then spread by travelers and armies.

⁸⁴ Increasing demand and a drop in the number of workers led to initial price increases in Europe. Afterwards, this trend was reversed, “with an increase in per-capita product stimulating natality, product slowly grew up while monetary mass decreased (the consequence of exporting silver in order to pay for the deficit with the Orient). Therefore, the price level necessarily began diminishing and induced a period of what we would term ‘deflation,’ which lasted until around 1480. This drop in prices meant a correspondingly higher value for precious metals and led to the frantic Portuguese and Genoese quest for gold and silver” (according to Findlay and O’Rourke 2007; see Norel 2009b).

⁸⁵ In contrast, Japan was probably not affected by plague epidemics: the country experienced demographic growth during the fourteenth century (see Lieberman 2009: 380).

a recession in trade, in western Asia and in Egypt, as well as in eastern Asia at the end of the Yuan era, marked by monetary disorders, upheavals and wars. Revolts and internal chaos led to the fall of the Yuan and the advent of the Ming dynasty in 1368. A hostile movement then developed in China toward anything or anyone foreign, within the context of a neo-Confucianist revival.⁸⁶ The overall decline in trade also reverberated in East Africa, for example, at Kilwa. Networks were restructured in the Red Sea and the Mediterranean, where Venice now held the upper hand following its victory over Genoa at the naval battle of Chioggia in 1381.⁸⁷ Moreover, Turkish invasions put a brutal end to the Genoese trade in the Black Sea. As early as 1344, the Genoese were expelled from Tabriz. Receding trade along Anatolian routes gave new impetus to maritime routes toward the Levant and Egypt, where the Latin merchants returned. In 1345, Venice negotiated with the Egyptian authorities for access to Alexandria, Beirut, and Aleppo: this further asphyxiated the Black Sea (Bouchon 2004: 22). The end of the fourteenth century was marked by a Turkish expansion into Europe, with the conquest of Thrace and Bulgaria and the control of Serbia, within the context of Christian division since 1378: one pope was settling in, in Rome, while another was settling in, in Avignon. Byzantium was besieged in 1394. Answering the call by *basileus* Manuel II and the king of Hungary Sigismund I, a “crusade” was launched, but the Christian armies were defeated at Nicopolis, in Bulgaria, in 1396.

As had been the case during the previous cycles, the decline of the world-system was not really visible in insular Southeast Asia, where various powers, and primarily Mojopahit, benefited from sustained links with eastern India. In contrast, in the north, the Delhi sultanate disintegrated in the chaos perpetrated by the Turkish–Mongol invasions led by Timūr Lang (Tamerlane). These invasions also struck western Asia, thus saving Byzantium from a Turkish invasion, for the time being.

Tamerlane’s dream was to resuscitate Genghis Khān’s empire; however, he died while preparing for the invasion of China, during a period of global upturn.⁸⁸ The trade recession was of short duration since, as early as the late fourteenth and early fifteenth centuries, the world-system had begun to regain a new economic dynamism, marked by the increasing significance of the sea routes (the overland Silk Roads would never regain their past glory). As had been the case during the previous cycles, China’s reconstruction under the Ming emperor Hongwu (1368–1398) marked the dawn of a new phase of growth and integration, not only for China, but also for the entire world-system. The Ming state set up a new administration that was committed to the renovation of the canal systems, reforestation, and agricultural development. Diplomatic contacts were established and a tributary trade was set up once again, this time strongly controlled by the state. Moreover, in the long run – and

⁸⁶ In Europe also, after the recession and the disaster of the “Black Death,” one notes persecutions against various minorities, such as the Jews. Mass reactions occurred in Europe against the political powers and the Church, which began selling indulgences at this time.

⁸⁷ This defeat forced Genoa to restructure its trade and capital accumulation networks. “The collapse of Barcelona’s leading private banks in the 1380s gave the Genoese merchant bankers” an opportunity “to become the most important financiers in the Iberian region” (Arrighi 1994: 117). The decrease in trade led to the development of piracy in the western Mediterranean.

⁸⁸ “Timur’s deed,” writes P. Boucheron (2009a: 23), “proved to be the event that set the fifteenth century in motion.”

paradoxically – Europe, unlike Egypt and western Asia, appears to have benefited from the impact of the Great Plague (Findlay and O'Rourke 2007: 119).

Table 11.11.1 *Comparative chronologies (tenth–fourteenth century): China and Japan; India; Southeast Asia*

China and Japan	India	Southeast Asia
946–1125: north of China, empire of the Liao founded by the Khitan		
960–1127: dynasty of the Northern Song	999: Muslim Turkish dynasty of the Ghaznavids in Afghanistan	992: Javanese attack on Srīwijaya
1004: peace treaty between the Song and the Liao, implying the regular remittance of tributes	1001–1027: Ghaznavid invasions in northern India	1017 and 1025: Chola attacks on Srīwijaya
1038–1227: northwest of China, empire of the Western Xia		1028: reign of Airlangga in eastern Java
1044: peace treaty between Song and Xia, with payment of tributes		Kingdom of Kediri/Singhasari
1124–1126: the Jürchen destroy the Liao Empire, and found the Jin Empire, which annexes northern China	twelfth century: Ghurid raids in northern India.	Decline of Srīwijaya
1127–1272: dynasty of the Southern Song		Expansion of the Burmese kingdom, which controls Tāmbralinga
1192: founding of the Kamakura shogunate	1192: capture of Delhi	
	1206: founding of the Delhi sultanate	
	1221: raids of Genghis Khān as far as the Indus	
	1229: Ilutmish, sultan of Delhi	
1260–1294: reign of Kublai. Founding of the Yuan dynasty		1250: Mongol conquest of Nanzhao (Yunnan)
		1254–1292: reign of Kertanāgara in eastern Java
		1283–1285, 1287–1288: expeditions of Yuan China against Vietnam
	1296–1316: 'Ala ud-Dīn Khaljī extends the Delhi sultanate in Gujarat, central India, and South India	1293: Chinese expedition against Java, and founding of the Mojopahit kingdom
1320–1321: first plague epidemics	1325: reign of Muḥammad ibn Tughlūq in the Delhi sultanate	fourteenth century: Mojopahit dominates trade routes
1333: collapse of the Kamakura bakufu	1336: famines in India; first phase of disintegration of the Delhi sultanate	1326: Javanese raid on Samudra
1351–1366: revolt of the Red Turbans	1346: founding of the empire of Vijayanāgara	1350: founding of the kingdom of Ayuthiā
1368: advent of the Ming dynasty	1347: founding of the Bahmani sultanate	
1368–1398: reign of Hongwu	1398: Mongol raids in northern India, capture of Delhi (1399). Dislocation of the Delhi sultanate	1395: Javanese attack on Palembang
	1391, 1394, and 1401: Gujarat, Malwa, and Jaunpur emerge as sultanates	

Table 11.1n.2 *Comparative chronologies (tenth–fourteenth century): Central Asia, western Asia, Persian Gulf; Egypt, Red Sea; East Africa, Madagascar; Europe*

Central Asia, western Asia, Persian Gulf	Egypt, Red Sea	East Africa, Madagascar	Europe
1055–1194: domination of the Seljuk Turks over western Asia		ninth century–: <i>Mabilaka (northwest)</i>	1066: conquest of England by William of Normandy
1096–1099: First Crusade		eleventh century: <i>signs of human activity in the Highlands</i>	1071–1091: conquest of Sicily by the Normans
1147–1149: Second Crusade		eleventh–thirteenth century: <i>Andranosoa (Androy)</i>	twelfth century: discovery of Arab science
1206: creation of a Mongol Empire by Genghis Khān	1171–1260: reign of the Ayyūbids in Egypt and Syria	eleventh century: Shirazi dynasty at Kilwa	1204: capture of Byzantium by the Fourth Crusade, founding of a Latin empire
1219–1221: the Mongols take Khwarezm and Khorasan	Saladin: 1171–1193	twelfth century: <i>Fiekena Phase (Highlands)</i>	twelfth–thirteenth century: urban development, emergence of the state, building of the great cathedrals
	1235: founding of the Rasūlid state in Yemen	thirteenth century: <i>ascent of Mahilaka; development of Vohemary</i>	1224–1248: conquest of Baetic Andalusia
	1248–1250: Eighth Crusade	thirteenth–fourteenth century: <i>Austronesian arrivals on the east coast (Zavaka, Zaframinia)</i>	1261: the Greeks retake control of Byzantium
1256: Hülagü's Mongol armies enter Iran	1250–1517: Mamluks' reign		
1258: the Mongols sack Baghdad	1260: victory over the Mongols		
1265–1282: Abaqa's reign	1260–77: Baybars I	1277: Mahdali dynasty at Kilwa	1309: creation of a bourse at Bruges
1295: Ghāzān's conversion to Islam	1277–1311: Qalāwūn		
1323: peace treaty between the Ilkhān Abū Sa'id and Egypt. Contacts with the Delhi sultanate	1311–1341: Muḥammad	first half of fourteenth century: <i>peak of Kilwa, peak of Mahilaka</i>	1337: beginning of the Hundred Years' War between France and England
1340–1410: independent power of the Jalāyerids in Iraq	1341–1382: period of instability	second half of fourteenth century: <i>decline of Kilwa</i>	1343–1346: crash of banks in Italy
Division of Iran among various dynasties	1347: plague epidemic	fourteenth–fifteenth century in <i>Anosy: Ambinanibe Phase</i>	1346–1348: plague epidemic
1381, 1392–1396, 1400–1402: raids by Tamerlane	1382–1399: Circassian Mamluk Barqūq	Southwest: <i>site of Rezoky</i>	1381: victory of Venice over Genoa at Chioggia

China: The Golden Age of the Song, the Mongol Conquest, and the Ming Revival

The ships which sail the Southern Sea and south of it are like houses. When their sails are spread, they are like great clouds in the sky. Their rudders are several tens of feet long. A single ship carries several hundred men. It has stored on board a year's supply of grain.
(Zhou Qufei, in Hirth and Rockhill, 1911: 33)

The Northern Song (960–1127)

The new dynasty of the Song, founded in 960 by a general, Zhao Kuangyin, reunified China in about twenty years. The first Song emperor took the name Taizu (960–976). The bureaucracy actively promoted unity and the growth of the empire. Regional military governors were replaced by high officials who were appointed by the central power. The Song set up an efficient administration by recruiting officials through competitive examinations.¹ They created public schools, as well as hospital and charitable institutions, which took charge of services that had previously been provided by Buddhist monasteries. Links between the central government and the provinces led to the writing of the world's first “official gazette” (Elvin 1973: 134). Defense was secured by large armies, partly settled in “military colonies,” hosting soldier-farmers or soldiers *sensu stricto* (Elvin 1973: 98). In addition, the state sought to favor the productive sector – not only that of armament – and trade. Under the Song, the Chinese Empire knew extraordinary prosperity in all social fields; their reign was marked by major technological and administrative innovations and the emergence of capitalistic features (Mielants 2007: 48ff.).

Progress in agriculture – and first of all an “upsurge in rice growing” – provided the basis for the global expansion and “socioeconomic revolution” of the Song period (Gernet 2002: 319), already initiated under the Tang during the eighth century and encouraged by the state. The intensification of agricultural practices was linked primarily to enhanced knowledge, and not so much to capital investments: a general pattern observable throughout Chinese history (Bray 1999: 174), although clearly there was additional investment in labor. Agricultural intensification was spurred by demographic growth as well as by migrations of Chinese farmers southward, which increased from the tenth century onward: “by 1080, instead of the largest part of the

¹ As Adshead notes (2004: 54), these examinations were not only devices for recruiting officials, but were also sources of social status.

Chinese population living in the Yellow River basin, there were more than twice as many people in the south” (Pacey 1990: 5), and while the population in the north was lower than it had been during the first century CE, it increased fivefold in the south over 1,000 years. The rise of metallurgy permitted the development of farm equipment, especially in the Yangtze River valley. The Song focused on improving irrigation and on disseminating agronomic expertise. Dams were built, new canals were dug, and sluice gates were improved. The adoption of quick-ripening² or drought-resistant varieties of rice (brought from Champa after 1012, or obtained through selection), was spread systematically by the Chinese administration, and led to double harvests. Treadle square-pallet chain pumps, bucket chain pumps and norias were used for lifting water. The government also lent money at low rates of interest, and “provided tax incentives for land reclamation” (Lieberman 2009: 551). The high yields of the rice fields ensured strong demographic growth (the Chinese population rose from 53 to 115 million people between the eighth and thirteenth centuries) and “freed” part of the population from agricultural labor – first of all the growing class of landless peasants. These people could now work at other activities, particularly crafts. Simultaneously, social and economic structures changed, with the expansion of large estates utilizing farm workers and tenants³ (Elvin has termed this a “manorial system”). While large estates were developing, “increased contact with the market made the Chinese peasantry into a class of adaptable, rational, profit-oriented, petty entrepreneurs” (Elvin 1973: 167). In addition to rice cultivation, one notes an increase in land given over to the cultivation of textile plants (hemp, mulberry); tea (produced mainly in Fujian); sugarcane, and lacquer trees. This progression was linked to expanding trade, paired with a certain amount of regional specialization in production. The rise in exchanges among regions was helped along by the existence of land routes and great waterways, the maintenance of a network of canals (whose use was rendered more efficient by the development of locks during the tenth century),⁴ and a significant coastal trade. This growth went hand in hand with the widespread marketing of agricultural products, and

² Quick-ripening varieties had been known in Champa at least since the first century CE and probably earlier (Bray 1994: 22). They belong to the *aus* type, which originated in the hill areas of what is now eastern India, Bangladesh, and Myanmar (R. Barker, conf.ling.cornell.edu/riceandlanguage/abstracts/Barker_abstract.pdf).

³ It is difficult to distinguish between “serfs” – bound to the soil and also to their masters – and tenants (see Elvin 1973: 70ff.): Elvin writes of “tenant-serfs.” Landowners took either a share of the crop or a fixed quantity of grain or money as payment for farming. Norel (2005: 441), like Elvin and the Chinese authors, writes of “serfdom” at this time, a questionable term given the analogy it introduces with the European system: “Serfs are generally tenants bound to the soil on a plot, and are therefore not really free to sell their labor; they are autonomous in their daily lives, however [note that they could sell some of their products on the market], while the manorial domain was cultivated by serfs or hired people who were placed under the direct authority of the ‘lord.’” But Norel points out the existence of a land market even for land leased to tenants. The divestiture of the Song state from the land market contrasts with the situation during the first Tang period on the one hand, and with the presence of the state in the commercial sphere, on the other. Pomeranz (2000: 81) also mentions “servile” labor in the large estates of the Yangtze basin, up until the late fifteenth century. In northern China, by contrast, servile labor disappeared earlier.

⁴ “During the eleventh century, 7 million *shi* (42 million hundredweight) were carried annually on the great canal connecting the Hangzhou-Suzhou region with that of Kaifeng” (Gernet 2002: 320). Pacey (1990: 7) points out that pound locks, like other inventions at this time, had been initiated by an official of the empire. The principle of the pound lock was not adopted in Europe until 1373 (Temple 2002: 218).

the creation of entrepôts; 12,000 ships thus transported grain. The private sector took a large share of this trade. “Whereas during the eighth century [during the Tang period], the biggest share of trade was in taxable commodities such as cloth and grain, private trade was now far greater in volume than trade in materials that were subject to levies by the exchequer” (Gernet 2002: 321). Forms of trade in partnership developed, along with associations of various investors. The consolidation of large estates occurred alongside an expanding market for grain and other goods. The growing grain market gave manor owners an interest in learning better techniques (Elvin 1973: 117).

Now aware of the weakening of the central state induced by the rise of the manorial system and the growing number of “serfs,”⁵ a sizeable reform-oriented, democratic movement (under Wang Anshi as head of state) attempted to improve conditions for small farmers and artisans between 1068 and 1085. Wang Anshi reformed the tax system, “instituted state loans at moderate interest,” and set up reserve granaries; all this was done in order to boost production. At the same time, the state was reorganized. “Wang Anshi believed that it was possible to increase everyone’s means of livelihood and the revenues of the state simultaneously, by developing production”.⁶ the masses would then support the government of the empire (Gernet 2002: 307).

Advances in agriculture and increased trade fostered impressive urban growth; the Song period saw the development of major cities: Kaifeng, the capital, with over one million inhabitants (Morris 2013: 156);⁷ inland cities such as Tanzhou (Hunan); Jizhou (Jiangxi); and the ports of Hangzhou (Lin-an), Wenzhou, in Zhejiang, Fuzhou, and Quanzhou, in Fujian. “Hangzhou probably had 800,000 to 1 million residents by 1100” (Morris 2013: 157). Between 980 and 1102, the number of households went from 52,906 to 439,998 in the prefecture of Tanzhou, from 126,453 to 335,710 in that of Jizhou, from 96,581 to 201,406 in that of Quanzhou, and from 94,470 to 211,552 in that of Fuzhou (Deng 1997: 94). Minzhou (today’s Zhucheng), Qingyuan (Ningbo, in Zhejiang), and Guangzhou (Canton) were other large seaports. The main ports’ populations were even greater than what statistics reveal: foreign communities were never included in censuses. The coastal province of Zhejiang experienced population growth three times higher than the average growth in China between 806 and 1208, thus showing the significance of maritime trade.⁸

Agricultural surpluses provided the basis for developing crafts and industries, both stimulated in turn by expanding trade within China and with countries abroad. The field of mines and metallurgy grew spectacularly, funded by rich landowners and spurred by technological improvements (wood charcoal was replaced by coal;⁹ bellows

⁵ Elvin (1973: 83) states that the number of tenant-serfs exceeded that of farmer-independent landowners.

⁶ Prior to Wang Anshi’s reforms, only 30 percent of land cultivated was taxable (Gernet 2002: 314). Moreover, a law passed in 1052 forced serfs who had left their manors to return to them; the law would be re-enacted in 1184 (Elvin 1973: 73).

⁷ Kaifeng was well located, at the junction of terrestrial routes and waterways at one end of an extension of the Grand Canal linking the Yellow River and the Yangtze.

⁸ The number of households in Fujian was 74,467 in 806 and 1,599,214 in 1208 (Deng 1997: 97). Deng shows that market mechanisms, not an arable land shortage, were responsible for the ports’ expansion.

⁹ The deforestation of northern China, already apparent under the Tang, explains this innovation, which did not become a reality in Europe until the eighteenth century. Deforestation continued throughout China under the Song and their successors.

were driven by hydraulic machines¹⁰ . . .). Progress in metallurgy was linked to advances in agriculture and to the increasing needs of the military: “most of the cast iron produced was destined for military uses such as metal arrowheads, armor, and stirrups” (Norel 2007). Large workshops in southern Hebei, central Shandong, and northern Jiangsu worked for the state. At Dengzhou (Henan) and Xuzhou (Jiangsu), rich entrepreneurs employed hundreds of workers. “Signs of class conflicts [appeared] between the wage earners and the wealthy ironmasters for whom they worked” (Findlay and O’Rourke 2007: 66). According to Gernet, iron production reached 114,000 tons in 1078.¹¹ Advances were also significant in paper and coal production, shipbuilding, and armaments. New types of weapons were invented and developed, such as ballistae, repeating crossbows, and tanks. By 1044, a military encyclopedia, the *Wujing zongyao*, included drawings of a gasoline flame-thrower (used as early as the tenth century);¹² it introduced the formula for gunpowder (saltpeter, sulphur, coal) and mentioned various types of weapons already in use: “smoke-producing and incendiary grenades, catapults for launching incendiary projectiles, and even explosive grenades” (Gernet 2002: 311).¹³ As early as 1067, the emperor forbade the exportation of saltpeter and sulphur. Knowledge about gunpowder nonetheless spread into the Khitan and the Jürchen domains, later into the Arab world,¹⁴ and into Europe during the thirteenth century.¹⁵ Ceramic production was also expanding. In addition to the kilns used in small enterprises, imperial kilns functioned at Kaifeng and in other cities. The invention of the spinning wheel in the silk industry dates to this period (Temple 2002: 121).¹⁶ The state encouraged the rise of textile production through the spread of books on sericulture. Urban workshops flourished. Reels using foot-operated treadles were developed for spinning silk

¹⁰ Double-acting piston bellows operated by water mills, however, were already known during the third century CE (Temple 2002: 56).

¹¹ China produced 32,500 tons per year in 998. As early as 1064, production grew by 90,400 tons per year. “It reached only 68,000 tons in England in 1788” (Gernet 2002: 320). The figure of 114,000 tons probably derives from Hartwell’s estimates (1963); Wagner (2001), however, has called these into question, pointing out that this figure, while plausible, is not demonstrable. At the same time, the price of iron decreased significantly: the price ratio [measured as a ratio of the value of iron to rice] went from 632:100 in 977 to 177:100 in 1080 in Sichuan and 135:100 in Shensi (Hobson 2004: 52).

¹² It is possible that the development of this weapon resulted from the spread of the technique known as “Byzantine” “Greek fire” during the ninth century, via the Silk Roads (Temple 2002: 229–230). “Greek fire” – perhaps “a mixture of bitumen, sulphur and pitch” (Jacomy 1990: 105–106) – was used by the Byzantines against the Arab fleet in 678. “A silk banner, dated to 950, and brought from Dunhuang, shows the Buddha under attack by Mara and his demons with flamethrowers” (Adshead 2004: 78).

¹³ It is obvious that the use of gunpowder was not limited to fireworks and firecrackers, despite what some authors have written. In addition, matches were produced from the tenth century onward (and perhaps as early as the sixth century in the Chi kingdom). A few authors, based on the *Sukraniti*, an Indian text whose dating is debated (sixth century CE, or later?) and which contains references to *agnichurna*, “firepowder,” have advocated either an Indian origin for the invention of gunpowder, or independent inventions in China and in India (see Phillips 2016), but this remains highly controversial (see Partington 1999 and Needham *et al.* 1987). On the repeating crossbow, see Temple, 2002: 222–223.

¹⁴ According to J. Diamond (1997: 247), “in about 1100 AD, an Islamic chemical treatise gives seven gunpowder recipes, while a treatise dated to 1280 AD [Al-Ḥasan al-Rammāh’s work] gives more than 70 recipes.” However, J. R. Partington states that gunpowder is not mentioned in twelfth-century Arabic texts (1999: 197).

¹⁵ The Jürchen invasion of northern China (1124–1126) made possible transfers of technologies that would benefit the Mongols, successors to the Jürchen.

¹⁶ Turrets using hydraulic power were also used.

thread. It is clear that all during this period “the pursuit of higher productivity, in the tradable goods sector, helped boost innovation” (Norel 2007)¹⁷ and this increase in productivity fostered prolonged growth of product per capita (Elvin 1973; Findlay and O’Rourke 2007: 64).¹⁸

Adapting itself to the evolving economy, “the Song state substituted the more flexible system of commercial taxes on shops, products and trade for control over prices and markets and the requisitioning of craftsmen to which the political authority had had recourse throughout the medieval period” (Gernet 2002: 322). Taxes were sometimes collected for the state by the merchants themselves. Economic expansion went along with the flourishing of an urban bourgeoisie, consisting of officials, landowners, and rich merchants. The demand for precious goods by this bourgeoisie led to soaring importations: incense and other aromatics, precious stones, ivory, coral, rhinoceros horn, ebony, and sandalwood. Luxury was no longer the privilege of the Imperial Palace but “had become the privilege of a larger part of the population” (Gernet 2002: 321). The flourishing of the internal market which was central to China’s prosperity during the Song period was thus combined with that of long-distance trade via the overland and maritime Silk Roads. External trade, division of labor and markets for factors of production progressed alongside one another, in a Smithian dynamic (Norel 2009b).

The Song dynasty dedicated itself to promoting trade with overseas countries and attracting foreign merchants into China, while at the same time controlling this trade, “which remained a state monopoly for luxury products” (Salmon 2004: 41). In 971, the customs office at Canton was reorganized. Until 989, Canton was the only port that was officially open for trade, but in this year the emperor named another superintendent of maritime trade at Hangzhou, and later a customs office was created at Mingzhou (Ningbo) in 999. Quanzhou was also a place of active – and illegal – trading. Great quantities of bronze coins were struck and producers were thus encouraged to sell their products for cash (see above).¹⁹

¹⁷ A chain drive for power transmission was used in 976 in a great mechanical clock. In 1090, the astronomer Su Song built an astronomical clock tower at Kaifeng; it used an early escapement mechanism, and through a gearbox, the hydraulic clock operated the turning of an armillary sphere which followed the apparent movement of the sun and the stars. A book written by Su Song in 1094 on this astronomical clock contains the world’s oldest known illustration of an endless chain drive for power transmission (Ronan 1988: 234; Temple 2002: 72, 105). The escapement mechanism was purportedly invented by the astronomer Yi Xing and the engineer Liang Ling-Zan around 723 CE, and used in an earlier astronomical clock. It was also during the eleventh century that al-Muradi, in Andalusia, imagined a clock driven by a waterwheel, functioning with complex gear trains. Al-Muradi’s works, however, seem to have had no direct connection to those of Su Song (Pacey 1990: 43). The interest of various cultures in the fabrication of clocks was founded upon religious precepts: it was important to know the calendar with accuracy, and determine the times for prayers; perhaps also, the inventors dreamt of capturing the very essence of things by reproducing them with exactness (Pacey 1990: 36). In any event, the development of clockmaking affected the ways in which the universe was perceived.

¹⁸ For energy capture, I. Morris gives an estimate of 30,000 kcal/cap/day in 1100 CE, and 30,500 in 1200 CE, figures that are certainly too low (2013: 111). Note that he gives an estimate of 31,000 kcal/cap/day for the Roman Empire during the first and second centuries CE (2013: 61).

¹⁹ In 976, the port of Quanzhou “paid the Northern Song authorities exotic goods of 176,000 *jin* [105 metric tons], among which was 10,000 *jin* of ivory [5,968 kilograms]. It also paid 61,000 rolls of cloth, 2,010,000 *guan* of bronze coins [1 *guan* = 1000 coins], and 27,000 *liang* of silver [1,007 kilograms]” (Deng 1997: 112). Around 987, trade with the southern seas generated one-fifth of the state’s revenue in cash.

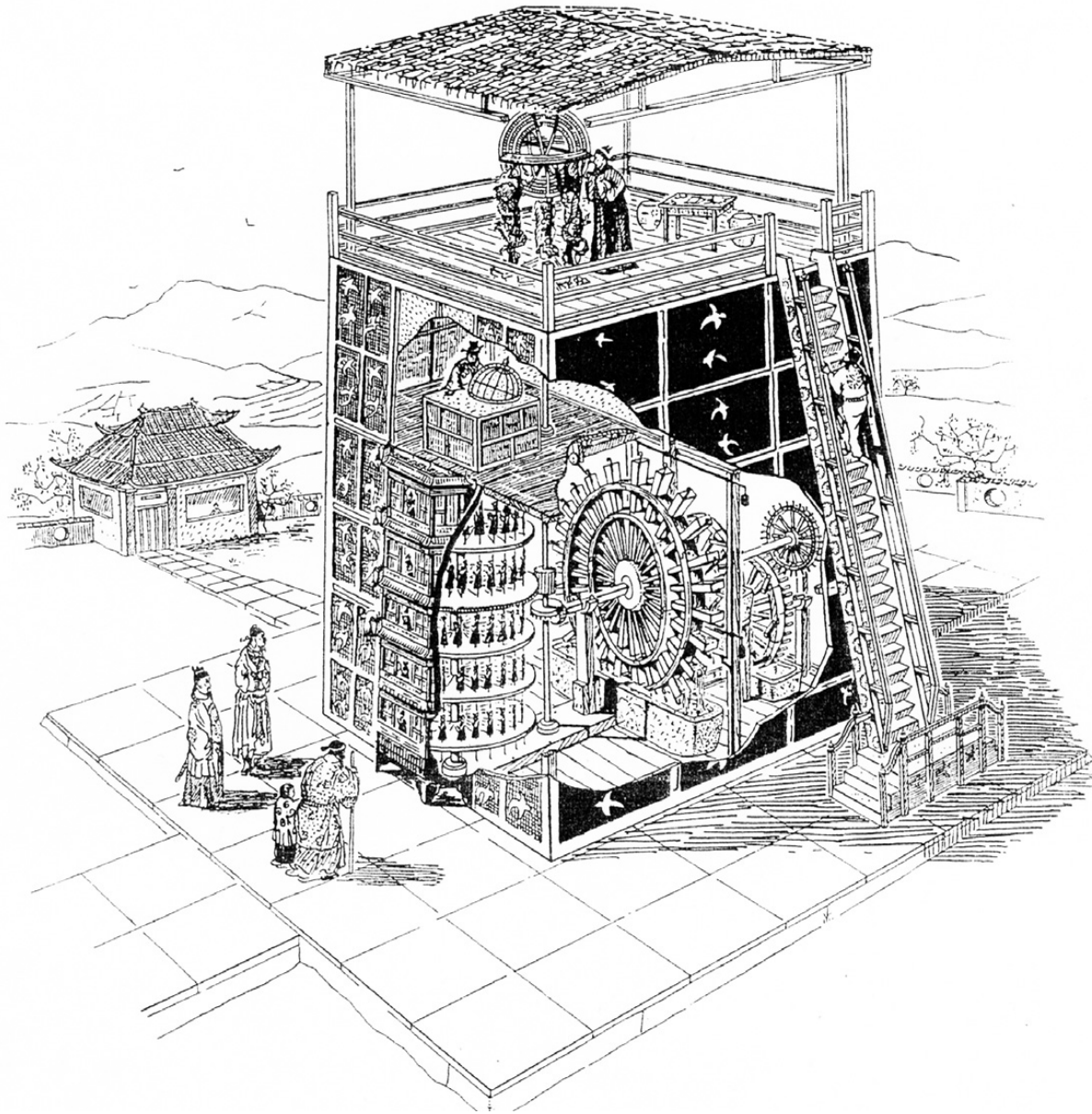


Figure 7.1 Hypothetical reconstruction of the astronomical clock tower built by Su Song at Kaifeng in 1090 (Needham *et al.* 1965: 449, drawing by John Christiansen). The clock was driven by a waterwheel; on top of the tower, an armillary sphere; on the last stock of the tower, a celestial globe. By permission of Cambridge University Press

Close contacts were made with the Islamic world. Zhao Rugua gives a list of tributary “Arab” missions at the Chinese court: these were probably composed of merchants.²⁰ Various Chinese and Arab texts mention the ownership of Chinese junks by merchants from western Asia. As in the Tang period, intermarriages between

²⁰ In 968, 986, 993, 1003, 1004, 1007, c. 1008, 1011, and in other missions between 1086 and 1094, and during the period 1205–1208 (Hirth and Rockhill 1911: 117–119). The *Songsbi* also mentions envoys in 973 and the ensuing years. The mission of 976 and an embassy in 1019 seem to have been more official. A mission from Poni (Brunei, Borneo) in 977 was led by a Muslim (see above). In 1008, “an [Arab] shipmaster, Topoli,

foreign Muslims and Chinese helped form a mixed-origin Muslim community.²¹ The Ashab mosque was built at Quanzhou in 1009.²² Indians were also present in China, notably during the great Chola period (Zhou Qufei distinguishes between Zhulian [the Chola kingdom], and Xitian [India]), as well as merchants from Srīwijaya or Java. According to Zhao Rugua, the Chola sent embassies to the Chinese court in 1015, 1033 and 1077, “with pearls and like articles as tribute” (Hirth and Rockhill 1911: 96).²³

Besides coming to China for its ceramics and silks, whose manufacture was developing (especially at Quanzhou),²⁴ merchants from the Indian Ocean and Southeast Asia came to Fujian to acquire metals: iron, lead, tin, copper, gold, and more importantly, silver; the silver famine in the Muslim world around 1000 certainly made this metal attractive.²⁵ China thus compensated for its trade deficit by making payments in copper coins and other metals (lead, tin, silver).²⁶ Large quantities of coins reached various countries in Asia. The *Songsbi* laments that “coins were originally the treasures of the Middle Kingdom, but now are in common use by the barbarians of the four quarters.” Money, however, has more than a purely economic dimension, and China, ideologically and politically, took advantage of the fact that Japan and Southeast Asia had adopted its currency. Wang Anshi banned the non-monetary use of copper, and encouraged the issuance of money during the 1070s.

In 1087, the Song appointed a superintendant of maritime trade at Quanzhou, and at Mizhou.²⁷ Zhao Bing (2015b) notes that from the eleventh century onward, the Offices of Maritime Affairs “depended in practice on a group of private merchants, the *yaren*,

arrived in China with people from Sanfoqi” (*Songsbi*). He visited the Chinese court again in 1011 and 1019, and appears to have been granted a Chinese title (Hirth and Rockhill 1911: 122, 123, 124).

²¹ “During the late eleventh century, a foreign merchant living in Guangzhou married a Chinese princess and eventually became a court official” (Deng 1997: 154).

²² Texts signal the building of another mosque at Quanzhou in 1131, by an Arab merchant. In 1163, a cemetery was built for Muslims in a suburb of Quanzhou (Deng 1997: 153).

²³ Maduanlin (who writes around 1300) and the *Songsbi* mention as offerings from the 1077 embassy “pearls [as big as] peas, a wash-bowl of opaque glass, white camphor, cotton, rhinoceros horns, jugs of frankincense, rose-water, *costus*, *asafoetida*, borax and cloves” (Hirth and Rockhill 1911: 101).

²⁴ Nineteen kilns dating to the tenth century have been recovered in the region of Quanzhou. Ceramics from Quanzhou belonging to this period have been excavated in Srīwijaya (Schottenhammer 1999: 278). Documents from the Cairo Geniza indicate that silk from Quanzhou was exported to the Mediterranean by the mid-eleventh century; they were sold at a moderate price at Fustāt (Goitein 1967, 1: 455 n. 53). Quanzhou was still a metallurgical center; it housed shipyards, and produced paper; seawater pools were exploited, in which salt was harvested through solar evaporation.

²⁵ Schottenhammer 1999: 276. The main location of the copper industry, however, seems to have been Changsha (Hunan), which became one of China’s largest cities.

²⁶ Gernet 2002: 322. V. Lieberman (2003: 74) has correctly criticized A. G. Frank for the systematic correlation he saw between trade surplus and efficiency in production processes. However, there is indeed a link between the quantity of money available and production: production is boosted by an increased quantity of money, through an increase in prices (according to the Fisher equation; see Norel 2005). The Song were aware of the economic problem posed by metals leaving the country: in around 965, they issued a decree according to which “the penalty for taking two strings of cash (nominally 2000 copper coins) out of China was imprisonment for one year. Those who were caught with more than three strings would be executed” (Wicks 1992: 24). At the end of the eleventh century, China would begin to issue paper currency (see below).

²⁷ On the role of these superintendents, see Schottenhammer 1999: 279. Prior to 1087, merchants were required to register and pay taxes at the superintendence of Canton, which issued an official certificate allowing them to travel to other ports.

as intermediaries in order to operate.” They were responsible, for example, for evaluating the price and volume of merchandise, ensuring that the court received its quota and vouching for the legality of the transactions (see Liao 1990). Chinese maritime traders did not travel much in the southern seas prior to the late tenth century. But great merchants, sometimes of foreign origin, emerged at the beginning of the eleventh century at Quanzhou and Canton. The Chinese sources thus write of a man called Abū Ruh in Quanzhou, who “in 1136 paid a considerable sum of money [for] a cargo of spices” (Chen Dasheng and Lombard 1988: 27). Appointed by the emperor, Xin-ya-tuo-luo, originally from Suhār and chief of the foreigners at Canton, left a fortune of several hundred thousand strings of copper coins when he died (Salmon 2004: 43). These foreigners or their children became the owners of landed estates and houses, and this alarmed the authorities: although the administration forbade foreigners from buying land and properties, the ban had little effect (Salmon 2004). While foreigners usually lived in separate quarters, at Quanzhou they mixed with the Chinese population (Clark 2009: 32).

Merchants sometimes acted as diplomats; one such example is Sun Zhong, who interacted with Japan in 1073 and 1078.²⁸ Trade relations with Japan appear to have been substantial. They brought about significant Chinese exports of copper coins, especially during the eleventh century (the Japanese government, in decline and lacking copper, no longer issued copper coins after 958). Japan exported wood, needed by China for shipbuilding. China also traded with the Korean kingdom of Goryeo, founded in 918, which adopted the Chinese exam system for the recruitment of administrators from 958 onward.

Overland routes were also active. Merchandise was carried to Inner Asia, by merchants and via tributes. Before the fall of Kaifeng, “35% of the tribute missions [towards China] came by land” (Hall 2001: 214). Tributes were also paid by the Chinese. In 1004, the Song were forced to sign a peace treaty with the sinicized empire of the Liao, set up by Khitan herders in northern China.²⁹ The treaty stipulated a yearly payment of 100,000 ounces of silver and 200,000 silk rolls. A new treaty in 1042 set the tribute at 200,000 ounces of silver and 300,000 silk rolls. Located between the Song Empire and Central Asia, the trading empire of Xixia (Gansu, Shensi, and western Mongolia), founded in 1038 by Tangut from Central Asia, controlled trade. In 1044, the Tangut also forced the Song to sign a treaty involving a yearly payment of 72,000 ounces of silver, 135,000 silk rolls, and 30,000 pounds of tea. The Khitan and the Tangut obviously demanded “the delivery of products essential for the development of their trade with Central Asia and the Middle East” (Gernet 2002: 322).³⁰ Most of the silver given to the Liao and to the Tangut returned to China through trade. In addition, the Song exported sugar and porcelain. From the northern regions and

²⁸ It is certainly inaccurate to claim that in Chinese society, marked by Confucianism, which disdained merchant activities, “merchants never rose to social or institutional positions of consequence” (McClellan and Dorn 1999: 121).

²⁹ In addition, the Liao Empire received tributes from Korea, and from the Jürchen and the Uighurs.

³⁰ The Liao were in contact with the Abbasid Empire. The court at Baghdad went so far as to make a wedding proposal for a Khitan princess. Unlike the Tang, the Song were never in a position to control Central Asia. This situation partly explains the maritime orientation of the Song trade. The significance of trade in tea and silk for the acquisition of horses goes back to the tenth century (period of the Five Dynasties), and to the Tang dynasty. As noted in Volume 1, tea was already being grown in China, and carried toward Central Asia by c. 200 CE (Houyuan Lu *et al.* 2016).

Inner Asia, China imported horses, sheep, furs, and woolen cloth, silver, hemp fabrics, and slaves. A horse was worth approximately 20 silk rolls or 125 pounds of tea (Shiba 1983; Findlay and O'Rourke 2007: 102). Border threats, throughout the Song period, led to a hypertrophy of the state, which absorbed ever-growing percentages of gross national product in order to support military expenses (Adshead 2004: 172). The Chinese sought to prevent bronze coins from being carried to the north by forbidding their use in trade with the Khitan and the Tangut, and by issuing iron coins in their northern territories.

The difficult relationships of the Song with their neighbors in the north and northwest partly explain their interest in maritime trade. The Chinese were themselves present on the oceans. The Song period was marked by a booming naval industry, where the share of the private sector was superior to that of the state.³¹ The sea junk was developed during the tenth and eleventh centuries,³² based upon various influences, especially from Southeast Asia.³³ The Chinese junk influenced Austronesian shipbuilders in turn (see below). The rectangular hull, with a hold divided by bulkheads forming watertight compartments, had been known since the Han period, as had the axial rudder (which Europe adopted around 1180).³⁴ Innovations during the Song period included the use of the compass, carried during the late eleventh century on Cantonese ships,³⁵ and the improvement of pivoting sails, which allowed ships to sail closer to the wind, on upwind courses.³⁶ From the period of the Five Dynasties onward (907–960), ships, which had between one and four masts, more commonly used woven sails or sails made of bamboo battens (in the past, sails had been made of woven leaves).³⁷ The number of sails, sail surface, and size of masts increased during the Song period (in addition, some masts were removable). Of varying sizes, *fuzhou* ships had V-shaped bottoms and multiple sails (between 3 and 12); they made up

³¹ It is surprising that Adshead (1995: 137) writes of limited maritime traffic prior to the thirteenth century.

³² G. Deng (1997: 27), however, states that the appearance of the *fuzhou* dates back to the late Tang period (see above).

³³ It is certainly wrong to view technological naval progress in China since the Former Han as “marked by isolation/independence” (Deng 1997: 59, 60).

³⁴ See a bas-relief on baptismal fonts at Zedelghem (Needham *et al.* 1971: 637 and fig. 1030).

³⁵ Gernet 2002: 328. Based on the *Pingzhou ketan* (whose preface is dated to 1119). According to G. Deng (1997: 39), the portable compass is described in 1044 “as equipment to guide army units.” Deng even mentions the possible use of the compass for a China–Japan navigation as early as the fifth or sixth century (1997). As early as the sixth century, the Chinese discovered that it was possible to magnetize iron needles by rubbing them with a lodestone. During the eleventh century, they learned how to magnetize iron by heating it, then cooling it, with the iron kept oriented along the north–south direction (Ronan 1988: 250). S. A. M. Adshead (2004: 81, 177) mentions the use of the compass under Liang Wudi (542–549), and – more surprisingly – by Tamil sailors during the fourth century, but he does not indicate his sources.

³⁶ As noted above, lugsails were known in southern China as early as the third century: “Cantonese or Annamese were using four-masted ships with matting sails in a fore-and-aft rig of some kind” (Needham *et al.* 1971: 601). At the time of the Southern Song, the sternpost rudder was improved: “the rudder blade showed lozenge-shaped holes” (P.-Y. Manguin, p.c.). Ships also adopted a system of multiple rudders, with a “middle sliding rudder” preventing the ship from veering (it acted as both rudder and daggerboard), and “board side rudders” which also worked as daggerboards and “stopped the ship from losing ground to leeward” (Deng 1997: 42; P.-Y. Manguin, p.c.).

³⁷ Woven sails, however, were mentioned during the Later Han period (Needham *et al.* 1971: 600).

the majority of seagoing ships.³⁸ At the end of the Song period, the Chinese also developed flat-bottomed vessels, for use in shallow water. In 1078, moreover, Emperor Shenzong had huge ships built, whose loading capacity has been estimated at 600 tons: these appear to have been precursors to the Ming vessels led by Zheng He.³⁹ Thanks to progress in boat technology, sea voyages were significantly shortened: in Han times, it had taken 150 days to sail from Guangzhou to Sumatra; during the Song and Yuan periods, the same trip took only 40 days.⁴⁰ Naval progress also allowed increasing quantities of bulk products to be shipped. “China exported not only lacquers, porcelains and silks, but also copper, ferrous materials, chemical products, sugar, rice and books, especially toward Southeast Asia. Archaeological excavations on a Javanese shipwreck dated to around AD 1000 have revealed a cargo composed of silver, pearls, and precious bronze items, as well as thousands of pounds of tin from Malaysia [Gordon 2008: p. 60]” (Norel 2009b). Increases in porcelain exports were obviously connected to improved shipbuilding and expanding maritime traffic.

Song state revenues from maritime trade doubled between the late eleventh and early twelfth centuries, and once again between the beginning and middle of the twelfth century (Schottenhammer 1999: 289 n. 23). According to T. Files (1972: 8), the *Song Annals* relate that between 1049 and 1053, the annual importation of luxury goods amounted to over 53,000 units of currency; in 1115 the annual total rose to 500,000 units. By that time, one-fifth of the state’s monetary revenues came from maritime trade. “When ships arrived, the government imposed a levy of 10 to 40 percent according to the nature of the merchandise imported. The rest of the cargo could be sold freely, subject to payment of a regular tax” (Gernet 2002: 324). Taxation on foreign merchandise reached 20 percent for high-quality products and 10 percent for more ordinary goods. Merchandise such as large elephant tusks and some resins had to be sold on the official market (Schottenhammer 1999: 279). In addition, taxes were levied on artisans and on Chinese domestic trade. The Song state was itself both producer and trader, within the framework of a kind of “state capitalism”: state workshops and trading enterprises were created, and state monopolies were instituted on the most lucrative merchandise, such as

³⁸ Deng 1997: 27–28, 35. Among other features, Deng also mentions “the use of a ballasted keel” and “the utilization of multiple stern rudders” (1997). Marco Polo and Ibn Battūta traveled on this type of ship. Ships of middle size measured approximately 20 meters by 5 meters. “The Song *kezhou*, privately owned commercial oceangoing ships, had as many as five large sails and ten jiggers, all made of cloth” (Deng 1997: 35). P.-Y. Manguin (1996: 270–271) wrongly states that Chinese traditional shipbuilding produced flat-bottomed boats exclusively; therefore, he has interpreted the discoveries of V-bottomed boats in the China Sea after the thirteenth century as the expression of an outside influence (if there was indeed a Southeast Asian influence at this point, it occurred during the early Song period or the late Tang period). It is true that technical hybridization can be clearly seen on the ships that have been discovered (Manguin 1996: 271–272).

³⁹ These ships were 90 meters long, 18.5 meters wide, and 22 meters deep (Deng 1997: 30). Besides seagoing ships, the Song built ships with propulsive wheels (powered by men using pedals) sometimes of a large size. According to Deng (1997: 32), “the pedal-driven propulsive paddle wheel was invented during the second half of the eighth century”; however, the underlying technique had been known since the fifth century.

⁴⁰ Deng 1997: 45. Recall that ships traveled southward during the winter; the voyage from the southern seas northward was made during the summer.

salt, alcohol, and perfumes, or on goods of special importance, such as iron and tea. Monopolies were also declared on imports such as ivory, turtle shells, coral, and incense. Commercial taxes and revenues drawn from monopolies ensured tax income equal to the income from land taxes, during the eleventh and the early twelfth centuries.⁴¹ In parallel, monetization of the economy developed: 52 percent of taxes were levied in cash during the mid-eleventh century (as compared to 4 percent in 749). The remaining taxes were paid in grain, silk yarn, and textiles (Hobson 2004: 54).

The extension of trade and the war effort against the Liao led the Song to issue increasing quantities of copper coins: from 270,000 strings of a thousand coins in 995–997, issues rose to 1,850,000 strings in 1007, 6 million strings in 1073, and 9 million strings in 1078.⁴² As of 1075, the Chinese were authorized to pay for imports in cash. Chinese copper coins were then found throughout eastern Asia and the Indian Ocean. Issuances of copper coins, however, diminished progressively due to the cost of manufacturing them and to the increasing use of paper money by the state (Sichuan had begun printing paper money in 1024).⁴³ The printing of paper money took on growing importance and fostered economic growth. From the late eleventh century onward, “the Song power institutionalized the issuance of convertible notes, in a set relation to the stock of metal” (Norel 2005: 443). Xylography (invented during the eighth century) made it possible to print paper money in several colors as early as 1107.

“The changes taking place round about the year 1000,” as J. Gernet notes, “were not confined to social and political forms, the economy and technical innovations. They were concerned with a deeper and less visible reality – man, his conception of the world, and how he viewed time, space, and the individual” (Gernet 2002: 330). The pictorial art of the portrait acquired new importance, revealing a “process of individuation,” well before Europe rediscovered this art (Schmitt 2009). A landscape tradition flourished, taking into account the idea of perspective in naturalist landscapes, but also aiming to be the ultimate expression of an inner reality: “The virtuous man,” wrote the painter Guo Xi in the eleventh century, “primarily delights only in landscapes.” This tradition was well represented by Li Cheng and Jing Hao, who authored a book on what he called “aesthetic theory.” Emperor Huizong created an Imperial Academy for painting. He also had

⁴¹ During the first Tang period, only one-sixtieth of the state’s income came from trade (Adshead 1995: 116). Only the profitable salt monopoly would be maintained, throughout the Song period and under the Yuan; the tea monopoly was abandoned as of Wang Anshi’s time. State workshops and enterprises were created in various fields: mines, foundries, textiles (silk), ceramics, and paper manufacturing.

⁴² Gernet 2002: 324. G. Deng (1997: 172) shows that the quantity of coins available per capita in China in 1070 was forty times what it had been in 834. Moreover, the use of silver bullion appeared south of the lower Yangtze, and spread into northern China during the eleventh century. The Uighurs from Central Asia used silver for their transactions with western Asia. In addition, during the late eleventh and early twelfth century, large quantities of iron coins were issued. However, the exchange ratio between copper [bronze] and iron set by the state was nine times lower than the market exchange ratio, and the experiment failed (Deng 1997: 175). In order to address its monetary needs, the Song replaced their 1,000-coin-string *guan* (a unit of account) with 770-coin strings.

⁴³ The first “bills of exchange” appeared at the beginning of the ninth century (see above). During the late ninth and early tenth century, “warehouses, pawnbrokers, money-changers and, later on, business firms in Chengdu (Sichuan) began issuing negotiable certificates of deposit” (Gernet 2002: 265). At the beginning of the eleventh century, the Chinese government authorized sixteen merchant houses in Chengdu to issue notes of exchange, before issuing its own paper money in 1024 (see also Elvin 1973: 157–158).

a treatise of architecture published, the *Yingzao fashi*, presented in 1100 by an official called Li Jie. The Song period marked the advent of practical rationalism founded upon experimentation: inventions, ideas, and theories were tested.⁴⁴ Xylography ensured the large-scale production of books (with text and illustrations) and thus a broad dissemination of knowledge:⁴⁵ as early as 960, the Song had printed treatises in agronomy, arithmetic, and medicine. The importance of written production matched progress made in the sciences, as well as in philosophy and history: in this Chinese “Renaissance,” such production expressed a desire to “build a synthesis of all human knowledge” (Gernet 2002: 330).⁴⁶ Shen Kuo (1031–1095), an astronomer, mathematician, and geologist, who described the compass and the use of movable type for printing, is a worthy representative of the spirit of this time. He also suggested using oil (which he knew from Shensi) in place of wood, and wrote about the benefits of circulating money. A high-ranking official, he also chose to involve himself in political affairs. A form of “neo-Confucianism” hostile to Buddhism (but nonetheless influenced by this religion) asserted its faith in the benefits of education and moral rigor.⁴⁷ Domestic Chinese development was also fueled by external commercial and cultural exchanges.⁴⁸ The power and organization of the Chinese state, however, did not permit the rise of autonomous cities or that of truly independent guilds or colleges, as would be the case in Europe in ensuing centuries; this said, associations of merchants and of craftsmen (*hang*) were strengthening, and schools and private academies were being created and developed between the eleventh and thirteenth centuries. Moreover, neither Confucianism nor Daoism was willing to experiment with nature; these systems of thought probably stultified the emergence of a scientific method in China (McClellan and Dorn 1999: 119, 139).

⁴⁴ In the field of medicine, immunization against smallpox was practiced in Sichuan, and later at the court during the tenth century, using inoculations containing mild forms of the disease. McClellan and Dorn (1999: 122) have overemphasized the fact that this boom in technology occurred with no concomitant rise in theoretical science and with no links to this science; these authors have also stressed the fact that scientific education took up only a fraction of the official educational system (schools specializing in the teaching of law, mathematics, and medicine appeared around 1100) (1999: 129–130).

⁴⁵ Well ahead of Europe, Song China invented movable type, made of ceramic or wood, during the mid-eleventh century, but this invention was little used before the fifteenth century due to the large number of Chinese characters (Gernet 2002: 335–336). In 1234, Korea briefly adopted movable metal type for printing; it would repeat this experiment only in 1402. Pacey views movable metal type as a Korean innovation (1990: 56).

⁴⁶ “A period of optimism and revival,” the Song age was marked by “the advent of practical rationalism based on experimentation”; this period has often been compared to the Italian Renaissance. “The scientific tendencies characteristic of the Song age were also apparent in the field of archaeology” (Gernet 2002: 341).

⁴⁷ The neo-Confucianist current developed under the Southern Song with the writings of Zhu Xi (c. 1130–1200), whose works the Jesuits brought to Europe during the seventeenth century. On this point, see Citton 2007.

⁴⁸ In the field of mathematics, while “Pascal’s triangle” was explained by Jia Xian in 1100, it had been obtained earlier by Muslim specialists in algebra, such as al-Karaji (who died in 1023) (Ronan 1988: 221–222; Djebbar 2001: 232–233). While we cannot be sure that these discoveries were connected, contacts certainly existed between Chinese and Muslim mathematicians. Chinese algebraists were perhaps “the best in the world” during the thirteenth century, but Chinese mathematicians, as McClellan and Dorn point out (1999: 131), “never developed a formal geometry, logical proofs or deductive mathematical systems.” State support of an utilitarian knowledge, these authors add, characterizes centralized societies.

The Southern Song (1127–1279): Long-Distance Trade and “Proto-Capitalism”

The profit from maritime trade is very great, . . . would it not be preferable to promote this trade rather than to tax the people?
(Emperor Gaozong, 1137)⁴⁹

The end of Emperor Huizong's reign (1100–1125) was difficult, marked by a revolt in Zhejiang which was in fact a protest against enforced taxes and requisitions. The Song had gone to considerable military and diplomatic efforts in order to contain the Liao and Xixia empires. Hailing from China's northeastern margins, the Jürchen arrived and deposed the Liao in 1125, forming the Jin Empire. Despite their alliance with the Song signed in 1120, they seized Kaifeng and annexed northern China in 1126, forcing the Song to move their capital to Hangzhou, south of the Yangtze, in Zhejiang.⁵⁰ In 1142, a peace treaty was signed between the Song and the Jürchen, setting the boundary at the Huai River valley. The Song were forced to pay a tribute similar to the one previously presented to the Liao. The Jürchen also attacked Korea, which managed to resist; from 1170 onward, and until the advent of the Mongol tutelage in 1259, generals retained much of the power in the Goryeo kingdom.

The loss of northern China stimulated agricultural development in the Yangtze basin, partly due to an influx of population from the north.⁵¹ The Song sought to increase areas under rice cultivation by developing lake shores and swamps. Textile plants were cultivated, including not only hemp and mulberry, but also cotton, which was grown in several regions (in the lower Yangtze, and later in the Huai River valley and Sichuan) from the twelfth century onward.⁵² “By the thirteenth century,” writes Elvin (1973: 129), “China had the most sophisticated agriculture in the world, India being the only conceivable rival.” This boost in agricultural production brought about a strong increase in population; however, this circumstance was not entirely new: by the eleventh century, southern China had more than twice the inhabitants of the northern regions. A high percentage (over 10 percent) of the population lived in cities (Elvin 1973: 176).

The sectors of craftsmanship and industry continued to prosper. “The technique of making porcelain reached perfection during the twelfth century . . . The best pieces came from Hangzhou, Longquan and Jianyang, in Fujian, from Ji'an and Jingdezhen, in Jiangxi” (Gernet 2002: 321). Textile production grew significantly. Complex machines

⁴⁹ Wheatley 1959: 30. The emperor, however, had banned the importation of luxury goods in 1127 (Findlay and O'Rourke 2007: 64).

⁵⁰ In 1129, in order to escape from the Jin invaders, “Emperor Gaozong of the Song dynasty exiled himself with a fleet of some 1,000 vessels from Mingzhou . . . 200 of those ships were ordinary commercial ships hired from merchants of Quanzhou and Fuzhou in Fujian Province” (Deng 1997: 28). This episode reveals the significance of Song naval power and of the power of the private sector.

⁵¹ R. B. Marks (1998: 56) signals significant Chinese arrivals in Lingnan at this time, paralleling development of water control and the intensification of rice cultivation (1998: 63). Other arrivals would occur during the Mongol invasion.

⁵² Bray 1999: 180. A new variety of cotton arrived by sea, at Shanghai. One may reasonably suppose that cotton had arrived earlier in China along the Silk Roads, since it was being cultivated at Turfan as early as 500 CE (Barber 2002: 59). According to Marks (1998: 118), cotton was already under cultivation in China during the Tang period and perhaps as early as the fourth century.

were used to prepare the yarn and to operate the winding process; they were driven by hydraulic power (for ramie and hemp), or operated by pedals, in spinning wheels which rotated as many as ten bobbins at a time (Pacey 1990: 23ff.). F. Bray (1999: 168) describes the agriculture and textile industry as a “symbolic pair.”⁵³ It was not just family households who produced textiles, but also the “houses” of the elite, state-sponsored manufactures, and private urban workshops, which worked with slaves and hired workers. Private workshops were more numerous at Hangzhou and in the lower Yangtze, the result of the migration of craftsmen southward, following the loss of northern China. A wide variety of looms were used. A putting-out system existed in the rural hemp textile industry during the Song period; this would later disappear, to reappear during the eighteenth century (Elvin 1973: 162, 274). In the military field, gunpowder was employed in various kinds of weapons. At the battle of Caishi won against the Jin (1161), catapults hurled explosive grenades. Gunpowder was also used as a propellant in a type of guiding tube made of bamboo (1132), precursor to rockets and incendiary arrows; later, there were proto-cannons or mortars, each “with a metal tube of iron or bronze; these made their appearance around 1280 in the wars between the Song and the Mongols” (Gernet 2002: 311).⁵⁴ The loss of northern China, however, deprived the Song of sizeable coal resources (Shanxi, Inner Mongolia); this hindered progress in iron manufacturing (Pomeranz 2000: 64). Intellectual development continued, promoted by the printing of texts. In a 1247 mathematical treatise, Qin Jiushao used “the nought, at the very time when it was appearing – along with Arabic numerals – in Italy” (Gernet 2002: 341).⁵⁵ Schools as well as public and private libraries multiplied.⁵⁶

The Song society guaranteed the inheritance of private property and welcomed the appearance of a capitalistic entrepreneurial spirit, as exemplified by the life of a man called Wang Ge, during the twelfth century. Wang Ge gained possession of forested hills, and called together vagrants to work at charcoal-burning in order to provide smelters with fuel. He erected two smelters, and utilized local iron ore. At the furnaces, he employed more than 500 workers, who had previously been landless people or criminals. With the profits from the foundries, he acquired a wine shop, and a lake where he employed several hundred families in the fishing trade (Goucher *et al.* 1998: ch. 11; Elvin 1973: 174). A “profit mindset” was also evident in state enterprises, where work time was sometimes measured using clepsydras during the thirteenth century (Elvin 1973: 81–82). At that time, China was experiencing a relative degree of social mobility.⁵⁷

⁵³ Until the Song period, male farmers were not involved in textile production, but things began to change at the time of the Southern Song. By contrast, and already much earlier, men did work in state-owned workshops (Bray 1999: 179).

⁵⁴ Quoting Needham, Temple (2002: 235) also points out the development of a wide variety of weapons using gunpowder during the twelfth and thirteenth centuries. Existing weapons were perfected: for example, bombs now had metallic shells. Increasing the level of saltpeter in the powder transformed incendiary weapons into explosive devices (in the early twelfth century).

⁵⁵ The sign for the nought had appeared much earlier, however, in Indian mathematics (see above).

⁵⁶ Adshead points out that under the Song, no progress was made toward cognitional analysis. He connects this to prevailing Neo-Confucian currents (2004: 193).

⁵⁷ Mobility was also geographical, since people were free to come and go. This mobility and freedom would be considerably restrained during the Yuan period. Note that during the Song period, women enjoyed rights (property rights, inheritance rights, etc.); they would be deprived of these rights later.

Producers engaged in geographical and functional specialization: not only did many new products now appear on the market (wood, fruit and vegetables, sugar, oil, fish and fry, paper, hemp, silk, and mulberry leaves), but some producers (of fry or of mulberry leaves, for example) reserved functional niches for themselves in the chain of the final product and “exported” their intermediary products to other regions. Already during the Northern Song period, as a corollary to this type of specialization, some Chinese farmers began importing their own food from other regions so that they could focus on their local specializations with a clear comparative advantage . . . [In some regions], rice production completely disappeared (replaced by tea, oranges or mulberry leaves), for example around Lake Tai, near Suzhou and modern Shanghai, whereas Jiangxi increased its [rice] production. (Elvin 1973: 168; Norel 2005: 439)⁵⁸

Slowly “the network of local markets was integrated into regional systems structured by a hierarchy of intermediary markets and great trade centers” (Bergère 1986: 23; Norel 2005: 440). This evolution occurred gradually between the ninth and twelfth centuries within China. “A Smithian dynamic was fully in place, helping augment the producers’ income through access to larger markets, which in return determined functional and geographical specializations, leading to a later drop in costs” (Norel 2005: 439). Rural domestic craftsmanship benefited from direct access to the market.⁵⁹ Women engaged in trade (in silk, in particular), a practice which contrasted sharply with the position of women in Hindu and Muslim societies.⁶⁰ The growth of trade was encouraged by investments of savings with producers or traders. “Testimonies show the existence of production loans, or loans making it possible to store merchandise: during the twelfth century, [a trader called] Qian Tai advanced money to weavers in exchange for their production six months later. He also advanced money to his brokers so that they could build storehouses capable of holding several thousand lengths of cloth” (Elvin 1973: 162; Norel 2005).⁶¹

Trade progressed, on the domestic market and with countries abroad. Cut off from the Silk Roads, China looked toward the sea. A navy was created in 1132, and the Song promoted exports via maritime routes. In Fujian, “entire sectors of the rural economy were linked to exports” (Norel 2009b: 207). Commercial taxes and monopolies now

⁵⁸ F. Braudel (2002, 11: 588–589) is mistaken when he describes an unchanging China, with “a market economy,” but without “capitalism,” due to the grip held by the Confucian bureaucracy, which was hostile to enrichment in industry and trade.

⁵⁹ “Early on,” notes P. Norel (2005: 442), “the Chinese peasantry became engaged in craftsmanship and small-scale industry.”

⁶⁰ The status of women varied according to region, however, in these two cultural worlds. In China, women had no access to administrative positions: they were forbidden from entering recruitment competitions. Growth in textile production, as Goucher, LeGuin, and Walton (1998) note, does not seem to have led to major improvements in the situation of women, who were nevertheless the primary producers in this domain.

⁶¹ While “Chinese techniques differed little from those of the Italian city-states, as early as the twelfth century, capital property seems to have been less safe, due either to recurring spoliations from the state, or to the absence of government debt securities that could have given a stable, legally protected form to the savings” (Norel 2009b: 210). In addition, “lenders seem to have required nominal interest rates (the actual rates are not really known) that were higher in China than they were in Europe or in Japan. The fact that many farmers, who were marginally craftsmen, contracted loans, bolsters the idea of a high nominal profitability for their own businesses” (Norel 2009b: 210).

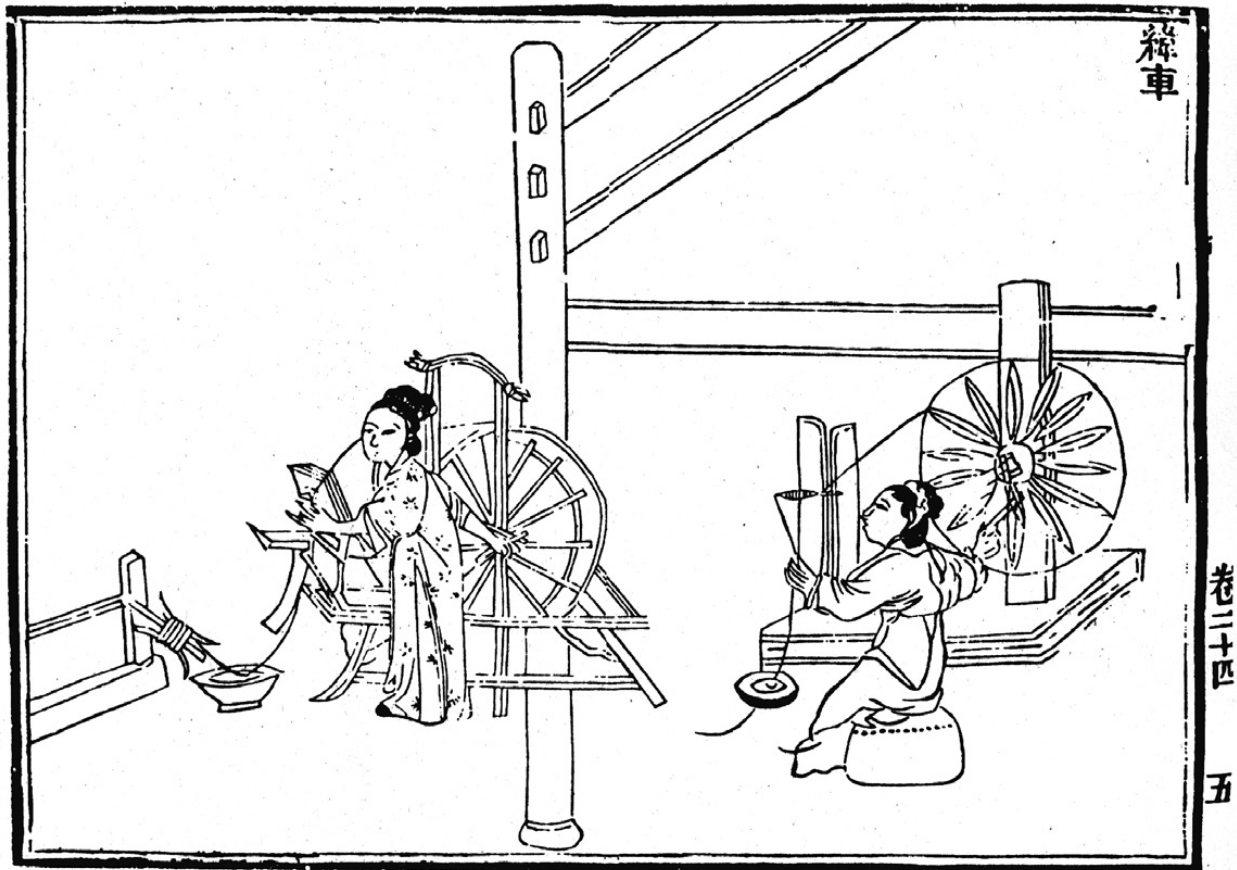


Figure 7.2 “Winding the thread on the spindle” (Needham *et al.* 1986: 184). From a manuscript dated to 1313, published in 1530. By permission of Cambridge University Press

ensured fiscal incomes far exceeding land tax revenues.⁶² An edict dated to 1146 proclaims: “The profits of foreign trade contribute much to the national income. We ought to continue the old system by which people of faraway countries are encouraged to come and abundantly circulate goods and wealth” (Pearson 1991: 103). At the end of the twelfth century, nearly 70 percent of state revenues came from indirect taxes on products such as tea, salt, and wine (Deng 1999: 316; Mielants 2007: 50). “Revenue from maritime customs duties, which consisted of only half a million strings of a thousand coins at the beginning of the dynasty, rose to 65 million strings in 1189” (Gernet 2002: 324).⁶³ The government “assisted the private sector by building an extensive infrastructure of harbors, warehouses, and other facilities, as well as beacons and lighthouses along the coasts” (Findlay and O’Rourke 2007: 64). The expanding cash economy involved an increasing use of paper money, which in turn increased the volume and speed of commercial exchanges; paper money became the main form of

⁶² Merchants, however, were taxed at a lower level than were rural producers (Hobson 2004: 57).

⁶³ “Offices for merchant ships, which acted as both police and customs offices” were set up at Jiaozhou, Hangzhou, Ningbo, Quanzhou, and Canton (Gernet 2002: 324).



Figure 7.3 Spinning wheel using several spindles operated by a treadle mechanism, for cotton (Needham *et al.* 1986: 219). From a manuscript dated to 1313, published in 1530. By permission of Cambridge University Press

currency during the twelfth and thirteenth centuries:⁶⁴ under the Southern Song, issues attained the equivalent of 400 million thousand-coin strings (Gernet 2002: 325).⁶⁵ Paper money was the sign of an expanding market as well as the consequence of increased military spending. The use of paper was a remedy for the copper shortage and for the manufacturing costs of the now-devaluated coins. Institutions of banking and credit facilitated an increasing level of monetization that helped integrate regional economies; this phenomenon can also be linked to the worker mobility noted above, within a context of growth in both production and trade.⁶⁶ Private notes also circulated, in a world of merchants where credit was common (Elvin 1973: 161). Some sea merchants became immensely rich; one was Yang Ke, from Quanzhou, whose wealth was evaluated at 2 billion coins, representing “one-third of China’s money supply for

⁶⁴ This was a solution to the lack of copper in the empire, due to the loss of the mines of northern China: during the twelfth century, the state minted only 100,000 *min* per year (one *min* = 1,000 coins) (Deng 1997: 173). The Song also issued iron coins, and therefore must have been concerned about the ratios among various currencies.

⁶⁵ By comparison, under the Northern Song, the total coins issued amounted to 200 million strings. On this point, F. Braudel (2002, 11: 113) is incorrect when he writes that “paper money did not play the role in China that it did in the West as the accelerator of capitalism.”

⁶⁶ J. Needham (1991: 325) mistakenly sees an “under-development of credit in China under the Song and the Ming”; he blames the Chinese state for this.

a year” (Deng 1997: 111). The Pyu were the richest family; they were Muslims from Canton, hailing from Champa, and were responsible for controlling foreign ships (Salmon 2004: 44). R. von Glahn notes that at this time in China, it was more profitable to lend money than it was to buy land (1996: 244).

Chinese involvement in trade in Southeast Asia and in the Indian Ocean intensified during the twelfth and thirteenth centuries. The “economic activism” of the Southern Song must be repositioned within a context of threats exerted on China by the Jin, the Xixia state (in the northwest), and the Mongols from 1227 onward. This hostile climate did not prevent some trade from developing: twenty marketplaces were set up along the border with the Jin Empire; despite the ban on the use of bronze, and the setting up of a zone utilizing iron coins, significant quantities of bronze coins were carried to the north. In addition, due to a shortage of horses, the Song established markets in Sichuan and Guangxi; these made it possible for the Dali kingdom in Yunnan to trade horses (Palat 2015: 77). As this trade was uncertain, however, the Chinese world had no other choice but to turn resolutely toward the sea. Bureaus for maritime trade in Ningbo, Hangzhou, and Guangzhou began investing in long-distance trade (Deng 1999: 307). Various forms of partnership developed, between state and private traders, or between merchants often belonging to the same town or province.⁶⁷ “Officials and members of the court held shares in shipping companies” (Mielants 2007: 53),⁶⁸ and even “persons of quite modest means” invested some money in trade ventures in the southern seas (Elvin 1973: 143). Wealthy merchants bought rank and integrated the elite (Mielants 2007: 55). The size of Chinese junks increased, and Chinese traders from southern provinces took a growing share in the trade of Southeast Asia (toward Sumatra and more importantly Java) and the Indian Ocean; at this time, the Chinese were present in Sri Lanka and on the Malabar coast. Foreign merchants also owned junks, built in China with some of their materials imported.⁶⁹ Their crews, as well as the agents these merchants employed, may or may not have been Chinese. The great junks of the Song era were ships with four or six masts, twelve great sails, and four decks: each ship carried a thousand men. The Song built a massive war fleet.⁷⁰ During the year 1274, as many as 10,000 war vessels were built at Ezhou (Hubei). Chinese cartography was then experiencing remarkable progress. At this time, it was probably “the most precise and accurate in the world” (Gernet 2002: 328). The *Liuzheng tu* by Yang Zhia contains the world’s oldest printed maps, depicting western China; they are dated to 1155. A map of China engraved in stone (c. 1137) is surprisingly accurate (Goldstone 2008: 138).

⁶⁷ A text written in 1247 by Qin Jiushao gives a mathematical exercise dealing with the association of four partners in a business venture (Deng 1997: 102). One finds partnerships of the *commenda* type similar to those found later in Italian cities.

⁶⁸ According to Zhao Bing (2015b), “the Chinese government organized joint-venture commercial expeditions with private merchants. For instance, the Guangdong and Fujian regional governments provided junks, while private merchants organized trade, and profits were shared between the government (70%) and the private merchants (30%)” (see Chaffee 2006: 406).

⁶⁹ Japan exported wood. Rudders were often made of hardwood from Southeast Asia. Coir was imported from the Indian Ocean (Lo 1970: 172).

⁷⁰ In addition, the Song requisitioned merchant vessels whenever and wherever necessary, for example in 1159–1161, during wars against the Jin, and between 1174 and 1189, to fight piracy (Lo 1970: 169).

We have two major documents: the *Lingwaidaida*, “Representative answers from the region beyond the mountains [in the south],” by Zhou Qufei (Cheu K’iu-Fei) (1178), an official who lived at Guilin (Guangxi), and the *Zhufanzhi*, “Records of Foreign People,” written in 1225 by Zhao Rugua (Chau Ju-Kua), who served as superintendent of maritime trade at Quanzhou (in Fujian).⁷¹ Zhao Rugua sheds light on major commercial zones: these were the southeastern coast of China, Southeast Asia around the Straits of Malacca, eastern Java (then in full development), India (Coromandel coast, Malabar coast, and Gujarat) and western Asia.

A ship “sailing from China in midwinter,” writes Zhou Qufei, “would arrive at Lamli (Lamri, on the northwestern corner of Sumatra) in approximately 40 days. Here it would trade during the summer; after which, with the monsoon, it would weigh anchor and sail on, taking 60 days to reach the land of the Arabs” (Filesi 1972: 15). Perhaps the junks did not yet sail as far as East Africa: the question of an ancient Chinese presence on the East African coast is still debated (see below). Along the African coast, Zhao Rugua lists Zhongli (northern Somalia),⁷² Bipalo (the coast of Berbera),⁷³ Cengba (Zanzibar), and even Kunlun *cengki*, “Kunlun of the Zanj,” probably Madagascar (see below). By the eleventh century, the Chinese possessed some knowledge about the East African coast: “the *Xintangshu*, written in 1060, contains a chapter on Malindi and on the northern coast of Kenya” (Lombard 1990, 11: 321 n. 149).

The first Chinese maps of Africa show that precise information was systematically collected from Arab, Persian, and Indian ship captains. A map dated to the fourteenth century, in the *Yutu* of Zhu Siben (1320, later published c. 1555 in the *Guang Yutu*), shows the African continent’s southern orientation and triangular shape.⁷⁴ According to a “modern reconstruction of East Africa as possibly envisaged by a Chinese official of the Song or Yuan dynasty,” an island off the East African coast appears to be Madagascar (Wheatley 1975: 84).

The Chinese chronicles written by Zhou Qufei and Zhao Rugua give us interesting data on African products reaching China at this time as well as on Indian Ocean trade. Ivory (already mentioned during the ninth century) came from Murbāt, in the Hadramawt, a port which seems to have been a thriving market for ivory. It also indicates the prominent place South Arabian merchants held in East African trade.⁷⁵ Aromatic resins, such as myrrh and

⁷¹ Zhao Rugua repeats some parts of the *Lingwaidaida*.

⁷² The country produced frankincense, ambergris, tortoiseshell, and “dragon’s blood” (Hirth and Rockhill 1911: 130–132).

⁷³ Zhao Rugua describes ostrich, giraffe, and zebra there. He indicates the existence of four cities (without naming them). He mentions the products of the country (Hirth and Rockhill 1911: 128) (see below).

⁷⁴ In addition, this map gives us a fairly accurate picture of Asia and Europe. Cf. also the Korean Kangnido “map” drawn and written in 1402 by Yi Hoe and Kwon Kun (in fact a collection of maps). The Kangnido map used maps (since lost) composed by Li Zemin around 1330, and Qingjun around 1370; these two Chinese maps may have been brought to Korea thanks to the Korean ambassador Kim Sa-hyeong (1341–1407). The “Kangnido map” contains not only information from Zhu Siben’s map, but also shows approximately thirty-five unidentified sites along the East African coast (Needham 1959, 111: 555). According to S. Digby (1982c: 131), “there is evidence in Chinese cartography that Chinese vessels had reached the Cape of Good Hope.” This cartography, however, also benefited from Arabo-Persian and Indian knowledge.

⁷⁵ “When ten tusks or more have been collected, they are brought to the Dashi, who ship them to Sanfoqi and Jiloting [possibly in the Jambi region] for barter” (Hirth and Rockhill 1911: 232).

incense, were also carried from the Horn of Africa toward ports of the Hadramawt (Murbāt, Shihṛ and Zafār, called Maloba, or Malomo, Shiho, and Nufa by Zhao Rugua). Such resins were also produced in the region of the Hadramawt that Zhao Rugua calls Dashi.⁷⁶ Zhao Rugua mentions other products from East Africa that were imported into China: “storax liquid gum,” or *sube*,⁷⁷ “dragon’s blood”; aloeswood;⁷⁸ an unidentified “aromatic wood” (from Zanzibar); and turtle shells.⁷⁹ At the start of the twelfth century, according to the *Pingzhou ketan* written by Zhu Yu, most rich Cantonese owned black slaves, called “devil slaves.” “The historical context suggests that the *kunlun* or ‘devil slaves’ described by Zhu Yu were probably the Arabs’ East African slaves and not the Southeast Asian *kunlun* of the Tang” (Wilensky 2002: 20). “Chinese sources from the Song dynasty create a more definite link than do Tang sources between *kunlun* slaves and the Arabs” (Wilensky 2002: 17). “The *Songshi* reports that *kunlun* slaves accompanied Arab envoys to the Chinese court in 977: ‘The Arabs (*da shi*) sent the ambassador Pusina . . . to present items from their country, as tribute. Their servants had deep eyes and black bodies and were called *kunlun* slaves’” (Wilensky 2002: 20).⁸⁰ Zhao Rugua notes that African men-at-arms were employed on Chinese junks. A shipwreck near Quanzhou dated to around 1277 was excavated during the 1970s. Spices, perfumes, and remedies were among the imports; some of the products came from Somalia (Tampoe 1989: 131–134).

Dashi also exported “pearls, rhinoceros horns, ambergris, glass, coral, brocades, clothes made of camel hair, cotton fabrics, satin, cloves [?], nutmeg [?], benzoin [?], *asafoetida*, flowers of gardenia, and rose water.” “The products of the country [Dashi] are for the most part brought to Sanfoqi, where they are sold to merchants who forward them to China” (Hirth and Rockhill 1911: 114).⁸¹ Zhao Rugua lists “opaque glass,⁸² coral, native gold, brocades, sarsenets, carnelian and pearls” as products from Da Qin (western Asia) (Hirth and Rockhill 1911: 103). The *mu xiang* (the *costus* of ancient authors) purportedly came from Hadramawt and the Somali coast (in fact, this plant originated in

⁷⁶ Dashi in fact refers to all Arab countries. “The capital of the country [is] called Misuli [Misr: Egypt]” (Hirth and Rockhill 1911: 115). Zhao Rugua’s work contains a notice about Misr (Wusili) and a notice about Alexandria (Ogento) (Hirth and Rockhill 1911: 144–146).

⁷⁷ *Liquidambar orientalis* L., from Anatolia (Hirth and Rockhill 1911: 200–201). According to these authors, the “storax of the ancients,” a solid gum, known to the Chinese as a perfumed resin from Da Qin, was made from *Styrax officinalis* L., originating in western Asia and the eastern Mediterranean. Since the beginning of the Christian era, the term *sube* has been applied to various products (see above). Note that the *Huan yushi* (*Huan-yü-shi*) (written during the tenth century) considers *sube* as a product from Annan (Annam) and Sanfoqi (southeastern Sumatra).

⁷⁸ The Chinese name *luwei* derives from the Persian *alwā* (Hirth and Rockhill 1911).

⁷⁹ Incense and myrrh: these resins are produced by *Boswellia* and *Commiphora* (Burseraceae family), respectively (see above). According to Wheatley (1975: 106), the term “dragon’s blood” refers to the resins of *Dracaena cinnabari* and *D. schizantha* (*D. ombet* Kotschy & Peyritsch). Miquel (1980, III: 422 n. 1) also mentions the resin of *Calamus draco* Willd. (*Daemonorops draco* [Willd.] Blume) (Arecaceae family), as “dragon’s blood;” this plant is of South Asian or Southeast Asian origin. See also Hirth and Rockhill 1911: 128, 193ff.

⁸⁰ In the 978 compendium of fiction entitled *Taiping guangji*, myths often mention *kunlun* slaves (Wilensky 2002: 12ff.).

⁸¹ This is already indicated by Zhou Qufei (Hirth and Rockhill 1911: 114, 116).

⁸² Three archeological sites dated to the Song period as well as six sites from the Liao period (tombs and pagodas) have yielded glass from the Muslim world, primarily from Iran (Ma Wenkuan 2004: 33–36).

Kashmir).⁸³ In addition to these goods from Dashi and Da Qin, Zhao Rugua lists products traded from South Asia. He mentions indigo and cotton from Huchala (Gujarat), exported toward the Dashi country; cotton from Malwa and Malabar; and precious stones and pearls from Sri Lanka. Like Zhou Qufei, Zhao Rugua provides a long chapter on the Chola country, which produced “pearls, elephants’ tusks, coral, transparent glass, betel nuts, cardamom, opaque glass, and cotton stuffs with colored silk threads” (Hirth and Rockhill 1911: 96). From Southeast Asia came camphor from Poni (Brunei, Borneo), Binsu (Barus, northwestern Sumatra, a region called Fansur [Pancur] by Marco Polo), from Danmaling (Tambralinga?) and Lingyasijia (Langkasuka); benzoin from Sanfoqi;⁸⁴ “sweet benzoin” from Zhenla (Cambodia); *dunau* resin (cf. Malay *damar*);⁸⁵ aloeswood from Zhenla (Cambodia), Zhancheng (Tonkin), Danmaling, Lingyasijia, Sanfoqi and Shepo (Java); sandalwood from Dagang and Diwu (Timor?); cloves from Shepo (carried by traders to Sri Lanka and the Malabar coast); nutmeg from the islands of Huangmazhu and Niulun, which were “Java’s dependencies”; lakawood from Danmaling,⁸⁶ Foluo’an (perhaps Kuala Berang, on the Thai–Malay peninsula), Pengfeng (Pahang), Sanfoqi, and Shepo; *sumu* wood from Zhenla (*sappan* wood or brazilwood);⁸⁷ cubeb⁸⁸ from Shepo; pepper from Shepo and Xintuo (Sunda);⁸⁹ cardamom from Zhenla and Shepo; cotton from Borneo, Java, the Philippines and Indochina, and more.

Contacts with the Islamic world intensified during the twelfth and thirteenth centuries. During the Song era, about twenty Muslim ambassadors traveled to China. Zhou Qufei (1178) and later Zhao Rugua (1225) emphasize the preeminence of the Arabo-Persians

⁸³ It is the root of a shrub growing on the southern slopes of the Himalayas and in Kashmir, *Saussurea costus* [Falc.] Lipsch., belonging to the Asteraceae family (see above). Barbosa mentions that it was exported from Cambay during the sixteenth century. Zhao Rugua’s assertion of an Arabian or Somalian origin for this product may reflect either deliberate misinformation given by merchants involved in its trade (Digby 1982c: 141), or the use of another aromatic plant. However, Zhao Rugua also mentions a region in India called Nan ni hua lo (perhaps in Sind) which purportedly had “the best quality of putchuk [*costus*]” (Hirth and Rockhill 1911: 98). The *Weishu* and the *Suishu* contain the earliest mentions of *costus*; it is given among products from Bosi, which is Persia (Hirth and Rockhill 1911: 221).

⁸⁴ *Styrax benzoin* Dryander, benzoin, originates in continental and insular Southeast Asia. The name *anxi xiang*, however, refers to Persia (Anxi: Parthia and later, Persia): this reveals a confusion with another aromatic substance (Hirth and Rockhill 1911: 201–202). According to Needham (1974, v, part 2: 137), this substance was *bdellium*. The name *bdellium*, brought in by the Persians in earlier times, would later be used in reference to benzoin.

⁸⁵ *Agathis dammara* (Lamb.) Rich. and *Agathis philippinensis* Warb. (family Araucariaceae) (dammar pine), Indonesia and the Philippines.

⁸⁶ *Dalbergia parviflora* Roxb., a liana with aromatic wood from Southeast Asia. During the Song period, the best “lakawood” is said to have come from Srīwijaya, which must have imported it from other regions. During the fourteenth and fifteenth centuries, Nanwuli (= Lambri, Aceh) was known for exporting the best quality of lakawood: this reveals new political and economic situations. There was an increasing use of this liana, whose sap was used in a perfume imitating “dragon’s blood” (a product from the western Indian Ocean) (Heng Thiam Soon 2001: 144–145): at this point, Southeast Asia developed a new substitute product.

⁸⁷ *Caesalpinia sappan* L. (family Caesalpiniaceae), which originates in China and Southeast Asia. It can be used as a purplish dye. The term “brazil” derives from *bresilium*, “ember.”

⁸⁸ *Piper cubeba* L. (family Piperaceae), a plant native to Indonesia.

⁸⁹ Prior to Zhao Rugua, Zhou Qufei was the first author to mention pepper as a product from Indonesia. A note added to Zhao Rugua’s text by the editors reads: “Some say that most of the pepper comes from the country of Wuliba in Nanpi” [Malabar coast].

(Schottenhammer 1999: 280). Many funerary stones have been discovered – with inscriptions in Arabic or Persian, sometimes in both languages – reflecting these Muslims’ integration into the Chinese world; the earliest stone dates back to 1171. The geographical origins of the dead were diverse : Yemen, Bukhara (in Central Asia); Khalat (in Armenia); and above all Iran. The Muslim cemetery at Ling-shan, “The mountain of the souls,” contains a small gallery whose curved columns are linked by some archaeologists to the Tang period. In the middle of its semicircle are ancient tombs which are said to be those of “the first colonizers.” “One finds here the model of the ‘sacred tomb,’ which recalls that of the Indonesian *kramat* or the *dargha* of the Indian subcontinent.”⁹⁰

Throughout the Song period, the Muslims played a significant role in both trade and politics. In late 1276, Pu Shougeng, the last superintendent of maritime trade at Quanzhou and commander of the province’s naval squadron, who ceded control over the city to the Mongols, was a rich Chinese merchant of Arab or Persian origin. His son-in-law, Fo-lian, owned “eighty vessels and left 130 measures of pearls when he died.” Chinese sources also mention a merchant “originating in Sirāf” whose wealth “might have been ranged in second position after that of Pu.”⁹¹ Arab and Persian merchants were in fact “the main actors in east-west trade” (Salmon 2004: 47).

Indians continued to travel to China. A bilingual Chinese/Tamil inscription devoted to Vishnu and dated to 1281 has been found at Quanzhou, which has also yielded some statues and bas-reliefs. A sizeable Tamil population appears to have lived at Quanzhou during the thirteenth century. While Indians settled in China, Chinese were present in the Chola kingdom (Kulke 1999).

The Chinese sources also mention contacts with Korea, the Ryukyu Islands, Annam, Tonkin, and – in insular Southeast Asia – contacts with Srīwijaya (Sanfoqi) and Java.⁹²

Trade also developed with Japan, despite that country’s situation at the time. During the eleventh and twelfth centuries, the Japanese archipelago was experiencing developments that had already begun during the previous centuries; its evolution is comparable in some ways to European feudalism. Peasants were subject to local lords, who held most of the power in relation to a weak central government, a situation helped by the country’s geography.⁹³ Warrior clans and private armies employing samurai emerged.⁹⁴ Fights between two rival clans – and within these clans – ended with the founding of the Kamakura shogunate in 1192 and the setting up of a military administrative structure.⁹⁵

⁹⁰ Chen Dasheng and Lombard 1988: 28–29. A legend attributes these tombs to “Muslim pilgrims sent by Muhammad during Tang Emperor Gaozong’s reign (618–626)” (Schottenhammer 1999: 273).

⁹¹ Chen Dasheng and Lombard 1988: 27; Salmon 2004: 47. According to G. Deng (1997: 99), when the Song army withdrew from Fujian to avoid the Mongol attack, “Pu’s 400 privately owned seagoing ships were used for this military manoeuvre.”

⁹² See above for the assessment by Zhou Qufei, who places Shepo just after Dashi and before Sanfoqi for wealth in luxury goods, and the quotation by Zhao Rugua.

⁹³ In agreement with Farris (2009), Lieberman (2009: 399), argues that “the most cogent single explanation for *ritsuryō* devolution [during the tenth century] [was] that the [Japanese] economy was simply too poor to sustain an elaborate Chinese-style system over the long term . . . Heian aristocrats and temples developed private, generally tax-exempt estates, and engaged warriors to protect those private assets.” Climatic deterioration during the ninth and early tenth centuries may also have influenced the economic decline observed.

⁹⁴ Buddhist monasteries were also involved in armed conflicts.

⁹⁵ The Minamoto clan claimed political power, alongside the old aristocracy. The *shogun* Minamoto no Yoritomo installed a government called *bakufu* at Kamakura: it controlled only part of the country.

The violence of the Kamakura era came with an expansion of Buddhism and the spread of the Jodo and Zen sects. This troubled time was nevertheless marked by agricultural progress, flourishing local markets and an increased monetization of the economy. According to Lieberman (2009: 397), “new ports proliferated” and trade increased significantly, while remaining modest compared to that of Southeast Asia. Japan delivered gold and sulphur to China, as well as mercury, swords, and screens. Besides bronze coins, exported in greater quantities until the mid-thirteenth century, China sent silver, silks, lacquers, paper, spices, and medicines to Japan (Deng 1997: 114). Japanese ships visited not only the port of Qingyuan, designated for external trade, but also coastal ports such as Wenzhou and Taizhou. Throughout history, the gold/copper ratio appears to have been much higher in China than it was in Japan. This led to inflows of gold into China and inflows of copper into Japan. The demand on the part of the Japanese archipelago for copper coins also meshed with the monetary needs of its expanding economy: during the Kamakura period, Japan’s main means of exchange went from rice (or textiles) to copper coins.⁹⁶

Significant contacts during the Song period promoted knowledge exchange.⁹⁷ As already mentioned, Europe welcomed various Chinese technical innovations during the twelfth century. Church sculptures already featured central rudders on ships as early as 1180.⁹⁸ A. Neckam mentions the compass in 1190.⁹⁹ One window at Chartres depicts a winding machine.¹⁰⁰ Alcohol distillation appeared in Italy during the twelfth century.¹⁰¹

Foreign trade went hand in hand with an ever-increasing outflow of Chinese mintage from Chinese ports; China paid for its imports partly with copper coins. Large quantities

The term “shogunate” comes from the title *sei taishogun* granted by the emperor. The old court resided in Kyoto. After Yoritomo’s death, the Hojo clan, to whom Yoritomo’s wife belonged, held most of the power. In 1232, the *Jozei* law code, reflecting the evolving Japanese society, was adopted; it would remain in use for more than 600 years. It formulated private property rights.

⁹⁶ Yamamura and Kamiki 1983: 342–344. The price of gold versus copper increased noticeably in China between 1100 and 1209. “One *ryo* of gold in China could be exchanged for nearly five to six times the amount of copper coins than could be obtained in Japan.” Note that the gold:silver ratio also appears to have been higher in China (especially during the twelfth century). In China, it was set at 1:6.3 in 1000; 1:13.3 in 1126; 1:12.1 in 1298; and fell to 1:4.0 in 1375; 1:5.0 in 1397; it rose again to 1:10.0 in 1415; fell once again to 1:5.0 in 1436; and later slowly rose during the late fifteenth century and early sixteenth century: 1:7.0 in 1481; and 1:9.0 in 1502. The estimates available for Japan are 1:5.0, and later 1:3.0 or 1:4.0 at the end of the thirteenth century, 1:4.66 in 1434, and 1:4.04 in 1477 (Yamamura and Kamiki 1983: 341, 345).

⁹⁷ In the field of astronomy, the torquetum of the Arabs was adapted for the Chinese equatorial system by Kuo Shou-Ching in 1270 (Temple 2002: 37–39). The Chinese principle was adopted by Tycho Brahe, probably through Gemma Frisius (1534) and Arab intermediaries.

⁹⁸ See above. In the western Indian Ocean, a central rudder is depicted on a ship shown in the al-Ḥariri manuscript of 1237, and Marco Polo mentions a ship with a central rudder at Hormuz.

⁹⁹ Temple (2002: 149) points out that knowledge of the compass may not have been transmitted through Arab lands, but via other intermediaries: the compass is mentioned by Arab sources only around 1232. Adshead (2004: 177) suggests that the sternpost rudder technique was transferred via the Qarakhitay Empire toward the Volga and the Baltic Sea (via Rus merchants): a surprising route (see also Needham *et al.* 1971: 651). Al-Muqaddasī (tenth century), however, may have referred to the use of a central rudder in the Red Sea (Needham *et al.* 1971: 652).

¹⁰⁰ According to J. M. Hobson (2004: 128), the winding machine reached Italy at the end of the eleventh century from Islamic Spain.

¹⁰¹ See above. It appears that Song China exported alcohol toward the southern seas (Needham *et al.* 1980: 149).

of coins have been unearthed in Japan, in Vietnam, in the Philippines, and in Indonesia: Chinese copper coins would become Java's everyday currency during the fourteenth century (Deng 1997: 173).¹⁰² These exports continued during the Ming period, notably during the early fifteenth century. Coins from the Tang period were still being used for trade. A wrecked vessel excavated in the bay of Quanzhou, dated to the thirteenth century and loaded with precious woods and pepper, also contained a set of iron and bronze coins dating from the Tang period, the "Five Dynasties," and the Song period. The Song enacted a number of measures around 1160, at a time when a new outbreak of war with the Jin had led to a growing need for metal. As early as 1147, "all ships leaving Fujian and Guangdong were inspected to see if they had cash on board" (Wicks 1992: 24). In 1160, the government backed its paper money with silver. From then on, silver took on greater importance in China. Although it was not yet a means of exchange, silver was used as a store of value and for payment of some taxes. A decree forbidding the export of bronze coins to Korea and Japan was issued in 1199 to limit the hemorrhage of copper, but it had little real effect.¹⁰³ Silver too had a tendency to flow out of the country; while merchants from Southeast Asia were bringing in silver to exchange it against bronze coins, silver was being carried away by merchants from the Muslim world (Von Glahn 1996: 55–56). The allowances in silver paid to border states were another cause for the outward flow of this metal, and played a role in its emergence, alongside "a long-term erosion of the bronze coins as a monetary standard" (Zurndorfer 1999: 409). Zurndorfer correctly points out that silver had been established for a long time in Central Asia – as early as the eighth century in Khwarezm – as a standard of value and means of exchange: this "silver area" obviously influenced China's evolving monetary system.

In order to prevent the exportation of metals and thwart their negative effects, the state imposed stricter controls on trade and augmented its issues of paper currency. Alongside paper money, "commercial circles began using negotiable instruments: cheques, promissory notes, and bills of exchange made their appearance during the eleventh century" (Gernet 2002: 325–326).¹⁰⁴ The ban on exporting coins was aimed at promoting exportation of products such as ceramics and silk.

A relative decline in maritime trade can be seen toward the end of the Song period. While the reasons for this decline – analyzed by A. Schottenhammer for Quanzhou – were multiple, excessive issues of depreciated paper money and of debased bronze coins (devalued by the addition of larger quantities of tin and lead to the copper) were certainly decisive.¹⁰⁵ Merchants were not eager to exchange goods from abroad against

¹⁰² In 1242, "one hundred million bronze coins were exported" to Japan only (Deng 1999: 315): this estimate may be exaggerated. For Mielants (2007: 53), however, "the balance of long-distance trade was unquestionably in China's favor," during the Song period.

¹⁰³ Despite these measures, in 1219, an official laments that "gold and silver of the land are flowing out in trade with savages from afar" (Wicks 1992: 25, after the *Zhaoye Zazi*). Note that the Southern Song also issued iron coins in some provinces.

¹⁰⁴ This "bill of exchange" mentioned by Gernet was not the equivalent of the thirteenth-century Italian bill of exchange, but rather like that of the *suftaja* of the Muslim countries. As both means of exchange and sources of credit, these certificates greatly facilitated transregional trade. In fact, credit notes appeared during the tenth century; see above.

¹⁰⁵ Schottenhammer 1999: 286. While at the time of the Northern Song, issues of paper money were backed by a stock of silver, the Jürchen seized the reserves of precious metals in Kaifeng, and the Song state was

these currencies. In addition, the attractive prices of copper abroad and the devaluation of measures of value in China encouraged merchants to carry away their copper money: sizeable quantities were therefore exported. An illegal trade developed, reflecting a contradiction between the interests of the Chinese state and those of private traders; this illegal trade often occurred in collusion with officials. The royal family itself was involved in maritime trade: many members of the imperial clan were appointed as superintendants. The fact that merchants were also forced to make some of their ships available to the state also played a role in the decline in trade and disaffection with the Song Empire.¹⁰⁶

Increasing piracy, high taxes, a negative trade balance, and more importantly expanding military expenses, due to the maintenance of a plethoric army¹⁰⁷ and a large war fleet,¹⁰⁸ were other causes for the Song's final decline. The Mongol threat thus largely explains why proto-capitalism ceased to develop in China. As Elvin has also pointed out, while markets and individual freedom did develop under the Song, "Chinese cities were not centers of political or personal freedom [as they were in Europe] . . . The continuing existence of a unifying imperial structure made independent urban development in China impossible" (Elvin 1973: 177). While the commercial sector flourished, ownership rights remained inadequate (Deng 1999: 318). Moreover, between the eleventh and thirteenth centuries, the gap widened between rich and poor, leading to increased social tensions in the countryside, where a few big landowners concentrated land in their hands, and enjoyed tax exemptions. While the tax base shrank, the tax burden grew, and the population began shifting toward the Jin Empire (Deng 1999: 305, 314). Minister Jia Sidao implemented reforms between 1263 and 1275 in order to limit the size of land estates and create "public lands," whose revenues were given over to war expenses.¹⁰⁹ The fact that some administrative positions were inherited reduced the efficiency of the exam system¹¹⁰ as well as the meaning of meritocracy. The bureaucracy became top-heavy and inefficient, undermined by

forced to pay them heavy war indemnities; moreover, a revolt in Sichuan limited the silver supply from this province (Zurndorfer 1999: 400). While some officials advocated a return to a uniquely metal currency (Ye Shi called paper money "empty money"), or called for a monetary readjustment in favor of bronze coins versus paper, Dai Zhi (1233) perceived that the danger came from an excessive issuance of money (von Glahn 1996: 46). In southern China, by the end of the Song period, silver and silk were being used as currency.

¹⁰⁶ Schottenhammer 1999: 287. Aside from the export of copper coins, the author also notes the melting of coins for the fabrication and export of Buddhas.

¹⁰⁷ The number of soldiers increased as early as the Northern period, in order to face the Liao threat. The army would grow from 120,000 men in 960 to 1,400,000 men in 1049. The military sector would absorb "80% of total government expenditures" during the Southern Song period (Deng 1999: 305).

¹⁰⁸ By the end of the thirteenth century, the Song had over 13,500 warships, and the Yuan had 17,900 (Deng 1997: 71). S. C. Chew (2000: 225–226) states that deforestation problems may have played a role in the difficulties encountered by China at this time. When the Mongols arrived, Emperor Zhao Shi fled with a thousand ships. Zhao Shi's First Minister reached Vietnam and later Thailand.

¹⁰⁹ Gernet 2002: 315. This attempt to counter a tendency – a secular one in China – toward land privatization may have led to the "flight from the dynasty by estate-holders, which resulted in the replacement of the Song by the Mongol Yüan" (2002: 91).

¹¹⁰ The examination system had become extremely popular: in 1275, "only one candidate out of 200 passed the examination," this also reflected a general desire for (neo-Confucian) education (Lieberman 2009: 612).

corruption and incompetence (Deng 1999: 303). These social factors may partly explain the apparent ease with which the Mongols took control of China during the second half of the thirteenth century. In addition, the military capability of the Mongols was reinforced by a sizeable trade in iron toward Mongolia, by transfers of technology and by certain innovations, such as improvements to trebuchets (Elvin 1973: 89).

China under the Mongol Domination of the Yuan (1279–1368): Exploitation, and Later (1320–) Recession and Uprisings

The Mongols captured Beijing, capital of the Northern Jin, in 1225, brought Korea under their control in 1259, and seized the entire “Middle Kingdom” in 1279. That year, the first seagoing fleet ever built by the Mongols destroyed the Song navy at the battle of Yin-shan (Elvin 1973: 90). Kūblai Khān became emperor, and founded the Yuan dynasty, which reigned until 1368.

The Mongols seized China during a period of economic growth in the world-system; nevertheless, the Chinese population declined during the thirteenth century, partly due to the massacres perpetrated by the Mongols and disruptions caused by the invasion.¹¹¹ As early as 1261, however, the Mongols created what they called an “office for the advance of agriculture,” and published treatises on agronomy. The sciences and techniques continued to develop, for example in military technology: improvements were made to cannons and “rifles” – first developed by the Song and the Jin.¹¹² By 1272, the Mongols had already introduced the counterweight trebuchet, a technique transmitted from Byzantium. As had been the case during the preceding periods, the state was both producer and merchant; “the Yuan emperors enlisted 260,000 skilled artisans for their own service” (McClellan and Dorn 1999: 123), especially in silk manufacturing. All the courtiers and imperial guards dressed in gold brocade. Kūblai settled weavers from Bukhara at Dadu (Beijing), where they produced silks called “Sadalaqi” (= Zandaniji?) (Liu 2010: 123). The Yuan encouraged the development of the entire textile industry, especially for the production of silk and cotton fabrics. They developed cotton growing, using a plant familiar to them. State offices were set up to provide needed technical support. “In 1296, cotton was incorporated into the tax system at very favorable rates compared to other textiles” (Bray 1999: 181). The textile industry benefited from innovations. “A 1313 handbook mentions 32 spindles mounted on a large spinning wheel, which could be turned by animals harnessed to it or by waterwheels. It was capable of producing one hundred catties of yarn a day or 59 kilograms, and was used largely in the spinning of ramie, though a smaller version was adopted for silk as well (Chaudhuri 1990)” (Palat 2015: 130).

¹¹¹ E. L. Jones’s estimate (1988: 109–110) that “one-third of the population was killed by the Mongols,” is, however, a gross exaggeration (Mielants 2007: 55).

¹¹² The first “guns,” in fact, were flamethrowers or fire lances, signaled as early as 1044, 1127, and 1132 (Temple 2002: 231). Note that “flame-squirters” had been used at Byzantium much earlier, in 675. Fire-lances are mentioned in a book written by the Syrian chemist Ḥasan al-Rammāh, c. 1280 CE (Needham *et al.* 1987: 259). During the thirteenth century, guns shot iron balls, and cannons used projectiles made of metallic shells containing gunpowder (the earliest recorded use of bombshells in Europe dates back to 1467). A gun dated to 1288 has been excavated in China (Needham *et al.* 1987: 264). A kind of bottle-shaped bombard was transmitted to Europe via a northern route (see above).

Despite economic growth up until the 1320s, Yuan China was no longer experiencing the state of emerging “proto-capitalism” that had prevailed during the Song period. The Mongols exercised greater control and maintained a rigid class system. Their governance would lead to an overall social and economic deterioration during the fourteenth century, marked by an increased exploitation of the Chinese peasantry. The fact that “actual rent was calculated in percentages of crop yield rather than in absolute amounts” was not “conducive to increased production” (Mielants 2007: 78). Issues of copper coins under the Yuan grew sporadic.¹¹³ They enforced the exclusive circulation of paper money, which became an international currency; paper money was convertible, and based on silver (the state took a commission on transactions). There was an outflow of silver westward on the continent,¹¹⁴ where its value was twice what it was in China. This led to declining metal reserves, prompting the Yuan to abandon the convertibility of paper money during the 1270s:¹¹⁵ this decision as well as the excessive issuance of paper money led to a series of massive devaluations of this money (1287, 1309 . . .)¹¹⁶ and an ensuing loss of confidence. Bronze coins were banned from international commerce. “As early as 1282 and 1283, measures were adopted to prevent the exchanging of banknotes for copper cash when offered by foreign traders in the ports, and to restrict the use of cash to the purchase of gold, pearls and such like valuable commodities. While permission was granted to use iron as a medium of exchange, gold and silver were prohibited” (Wicks 1992: 25).¹¹⁷ Prohibitions on exporting gold and silver, goods representing a greater metallic share than copper in the state’s metal reserves, were reiterated in 1293 and 1296. The mandatory use of paper money by foreign merchants ensured the importation of precious metals.¹¹⁸ This practice also allowed the state “to regulate the foreign exchange rate and thus become the indispensable intermediary between foreign and local merchants” (Abu-Lughod 1989: 335). The non-convertibility of paper money and massive issues of notes obviously placed the entire economic system at risk, and at the end of the thirteenth century, the president of the ministry of personnel, Liu Xuan, warned the government that it must drive prices downward: “national expenditure should be calculated with reference to government income” (Elvin 1973: 160).

In the government of Yuan China, the Chinese had access only to subordinate positions. In addition, the Mongols instituted a strict system of social partition, and discrimination among regions. Fiscal pressure was thus felt more strongly in southern

¹¹³ Copper coins were still being exported, although this exportation was prohibited: a ship of the Yuan period that sank south of Korea, contained “18,600 porcelain pieces, medicines, over 200 ship planks, and a total of 715 pieces of processed silver, tin and lead. In addition the wreck held 28 metric tons of copper coins [which represents more than 6 million coins]” (Deng 1997: 115).

¹¹⁴ The Muslim merchants responsible for collecting taxes were active in these westward transfers (von Glahn 1996).

¹¹⁵ Von Glahn 1996: 61–63. Mongol paper money was referred to as “silk notes” because the deposits guaranteeing it were not stocks of precious metals, but bales of silk.

¹¹⁶ In 1311, in fact, the Yuan were led to abolish the ban – which had probably not been respected – on the use of precious metals in trade (von Glahn 1996: 67).

¹¹⁷ Rockhill 1914: 424. For the fourteenth century, see Ibn Battūta 1982, III: 317.

¹¹⁸ During the early fourteenth century, Francesco Balducci Pegolotti writes: “the lord of Cathay takes your silver for his treasury and gives you yellow paper, stamped with the lord’s seal . . . and everyone accepts it when you buy silk” (Wick 1992: 25–26).

China and in the lower Yangtze valley, and this would lead to rebellions here between 1351 and 1358. The “public lands” of the Song period were appropriated by the Mongol aristocracy, which also left the large estates untouched. While Mongols usually occupied key posts in the empire, top posts and the management of Chinese officials were often entrusted to foreigners; until 1279, many of these foreigners were Muslims from Central Asia or western Asia (Persians¹¹⁹ . . .): 1279 marked “the end of Muslim experts at the Mongol court.”¹²⁰ Of the successors to Pu Shou-geng, superintendant of shipping at Quanzhou, ten out of thirty were Muslims (Digby 1982c: 134). Organized in associations (*ortaq*), “Muslim merchants acquired a near-monopoly on the profitable business of tax collecting” (Gernet 2002: 368).¹²¹ Muslim communities formed in northern China and in Yunnan, a province ruled by a Muslim from Bukhara from 1274 on (Gernet 2002: 334). Implementation of imperial policy was also entrusted to Uighurs, Tibetans, Russians, and Armenians. Marco Polo, who arrived in China in 1275, “remained with the Great Khān for seventeen years and all this time he was continuously on mission”: he supervised the collection of taxes at Hangzhou, “a city preminent to all others in the world”; he traveled to Yunnan; he ruled Yangzhou for three years, and so on.¹²² Partly in order to preserve harmony in cosmopolitan societies, the Yuan supported various faiths, such as Buddhism, Islam, and Christianity (Nestorians, and the Roman Church). The relations it established with the Muslim world influenced scientific domains. Kūblai, for example, invited Muslim astronomers to Beijing, where they developed various instruments, and contacts seem to have existed with the Marāgha observatory. The Yuan state employed experts in hydraulics as well as Muslim physicians. In addition, an embassy was sent to the Ilkhān Arghūn in 1286 (Chancellor Bolad was unable to return to China, due to insecurity in Central Asia following a conflict with the khānate of Djaghatai: he remained in Iran at the service of the Ilkhāns). Another Chinese embassy arrived at Hormuz in 1297, led by a man from Quanzhou. “He brought back seven varieties of rarities given by King Ghazan to the Yuan court” (Salmon 2004: 48–49). There were also commercial and cultural exchanges with India: in 1285, 1288, and 1290; Kūblai thus “dispatched envoys to South India to seek not only precious goods, but also skilled craftsmen and doctors” (Shagdar 2000: 137).

Yuan policy, combining military actions and support for merchants,¹²³ did not lead to a rise in capitalistic practices as it had during the Song period. Exploitation of the empire’s resources, along with growing social inequality, price increases, corrupt officials, and an inefficient overstaffed central administration, weakly connected to the provinces: all these were partly responsible for an economic downturn in China

¹¹⁹ Gernet (2002: 382) notes the importance of the Persian influence in the fields of mathematics and astronomy.

¹²⁰ Gaborieau 1995a: 447. Gaborieau gives the example of Ahmad, who, “from 1262 to 1282, was the real minister of finance of the empire, and developed foreign trade, by land and by sea.” Merchants from central and western Asia used banking practices from the Muslim world.

¹²¹ Initially, the *ortaq* were commercial partners of the Mongol powers. They lent money to the Chinese and collected taxes (in silver, silk, and grain).

¹²² The reality of Marco Polo’s sojourn has been recently – and wrongly – called into question (Wood 1995), but it has been defended in China itself.

¹²³ Ibn Battūta (1982, III: 320), however, points out the confiscation of both junks and their cargoes by officials, whenever merchandise had not been fully disclosed to these officials.

during the 1320s, and for the disorders that occurred. Four rulers succeeded one another between 1320 and 1329. The mounting misery of the peasant class, as well as deteriorating living conditions for other social categories (such as brine workers) triggered uprisings, especially during the late Yuan period.

Until the early fourteenth century at least, trading activity remained significant, however (Hobson 2004: 55). Because some canals had fallen into disuse, the Mongol power commissioned the digging of a new Great Canal for the transport of merchandise. The canal, completed at the beginning of the fourteenth century, linked Hangzhou to Beijing. The Yuan power fostered a trade revival along the Silk Roads that benefited merchants from Iran, Central Asia, and China. Most of the traffic, however, traveled by sea. The Yuan took advantage of the development of the merchant and military fleets during the Song period. The shipbuilding industry continued to flourish under the Yuan: in 1370, at Quanzhou, the Yuan state owned 15,000 seagoing vessels.¹²⁴ The largest *fuzhou* were 1,000-ton ships, each of them able to transport a thousand passengers. “Polo’s fleet [destined for Persia] had thirteen ships, each containing 5,000 to 6,000 *shi* of pepper [800–900 tons] plus 200 passengers. They probably had a loading capacity of 1,000 to 2,000 tons each” (Deng 1997: 30). The ship that Ibn Battūta purportedly took to Fujian in 1324 surely reached this size.¹²⁵ In Yuan times, however, the size of seagoing ships declined sharply (Deng 1997: 51);¹²⁶ this decline was due in part to problems in timber supply, but also to construction costs. Wood was imported from Japan during the late Song period; during the fourteenth century, Chinese shipyards imported timber by sea from Vietnam and Thailand (Pomeranz and Topik 1999: 52). Marco Polo’s accounts describe ships – probably junks – which employed “crews of three hundred men”; “in former times they were of greater burthen than they are at present” but “they are still so large that they carry from five to six thousand baskets of pepper.”¹²⁷ Marco Polo describes “the large ships employed by the merchants plying the Indian Sea” in this way:

The ships are built of fir-timber. They have a single deck, and below this, the space is divided into about sixty small cabins, fewer or more, according to the size of the vessels, each cabin affording accommodation for one merchant. They are provided with a good helm. They have four masts, with as many sails; and some of them have two [additional] masts which can be set up and lowered again, as may be found necessary. Some ships of the larger class have, besides (the cabins), to the number of thirteen bulk-heads or divisions in the hold, formed of thick planks let into each other (incastrati, mortised or rabbeted). The object of these is to guard against accidents which may occasion the vessels to spring a leak . . . The water running in at the place where the injury has been sustained, makes its way to the well, which is always kept clear. The crew, upon discovering the

¹²⁴ Deng 1997: 69, 70. According to Deng, the Yuan probably built even more ships than the Song (1997: 80).

¹²⁵ Ships destined for shallow waters may have been even larger. During the fourteenth and fifteenth centuries, Venice also built 1,000-ton ships, and during the fifteenth century, Genoa had carracks weighing up to 2,000 tons; however, China possessed a far greater number of larger ships than did the Italian cities (Mielants 2007: 54 n. 15).

¹²⁶ Deng emphasizes that the Yuan developed flat-bottomed ships (later called *shachuan*), that made it possible to transport grain from southern to northern China (1997: 28).

¹²⁷ The Chinese, writes Marco Polo, chose to reduce the size of the junks. One “basket” may have corresponded to a weight of 225 kilograms, that is, a load of 1,520–1,860 tons for the largest junks, and around 300 tons, for smaller ships (Ray 2002a: 9).

situation of the leak, immediately remove the goods from the division affected by the water, which, in consequence of the boards being so well fitted, cannot pass from one division to another . . .

The ships are all double planked; that is, they have a course of sheathing-boards laid over the planking in every part. These are caulked with oakum both withinside and without, and are fastened with iron nails. They are not coated with pith, as the country does not produce that article, but the bottoms are smeared over with the following preparation. The people take quick-lime and hemp, which latter they cut small, and with these, when pounded together, they mix oil procured from a certain tree, making of the whole a kind of unguent, which retains its viscous properties more firmly, and is a better material than pitch.¹²⁸

The advent of the Mongol dynasty coincided with renewed interest in Japan, Southeast Asia, and the Indian Ocean. The Mongols made an unsuccessful attempt to invade Japan in 1274 and in 1281 (typhoons dispersed the Yuan fleet during both attempts). The cost of defense operations, however, did weaken the Kamakura *bakufu*: it was forced to levy new taxes, which proved most unpopular. Trade between China and Japan, which the Song had already tried to limit, decreased from the late thirteenth century onward, and the entire Japanese economy began to slump during the fourteenth century, although Japanese – and Korean – merchants remained active in ports such as Quanzhou. Copper ore and silver were exported to China, which also received gold, sulphur, mercury, wood, swords, and pearls.

Küblai also launched military expeditions to Annam (1288), Champa, and even Java in 1292 (see below), with limited results. Chinese migrations to Southeast Asia, begun under the Song, continued, helping trade to develop. Commerce with the southern seas, where the Chinese were preeminent, remained significant via the main ports. Küblai borrowed the Song practice of taxing one-tenth the value of luxury goods, and one-fifteenth the value of basic goods. Marco Polo describes Gampu (Ganpu), the port of the city of Quinsai (Hangzhou, in the “province of Mangi”), “where large vessels arrive,” loaded with “luxury goods from India and other regions.”¹²⁹ The “Great Khan,” Marco Polo tells us, “draws very high revenues” from the city of Quinsai thanks to levies upon salt and sugar, which

¹²⁸ Marco Polo 1982: 260; 1980: 393–395. “The large vessels carry with them as many as ten small boats . . . they are slung over the sides . . . and accompanied by two or three large barks.” Marco Polo adds that “when a ship stands in need of repair, the practice is to give her a course of sheathing over the original boarding, forming a third course, which is caulked and paid in the same manner as the others . . . And this, when she needs further repairs, is repeated, even to the number of six layers, after which she is condemned as unserviceable and not seaworthy” (1980: 261). For comparison with Marco Polo’s account, see below the description of “vessels from China” by Ibn Battūta. For Marco Polo, the French edition annotated by Moule and Pelliot has been used here; this appears to be problematic, because the text has been “reconstituted from all of the existing manuscripts” (there are sixteen different manuscripts) (Boulnois 2001: 396). P.-Y. Badel (1998) has published a translation of a manuscript written in Old French. The use of nails to secure the planks may go back to the last centuries of the first millennium BCE (see above).

¹²⁹ Marco Polo 1980: 366. Emphasizing the size and wealth of the city of Quanzhou, Marco Polo indicates that each day “are consumed forty-three loads of pepper, each load weighing two hundred and twenty-five pounds,” 1980: 371). In Hangzhou “the number of bridges amount to twelve thousand,” and most of them are guarded (1980: 356, 365). Polo gives us a lengthy description of the city, with its specialized quarters, its courtesans, physicians, and astrologers, artisans and merchants, and its cobblestoned streets with conduits collecting water.

were produced in the province, and silk, “which they have in tremendous abundance.”¹³⁰ The main port was Çaiton (Zaitun in Ibn Battūta, or Quanzhou), “where all the vessels from India arrive with plenty of luxury goods and precious stones . . . as well as large and good pearls.” “The quantity of pepper imported there is so considerable, that what is carried to Alexandria, to supply the demand of the western parts of the world, is trifling in comparison, perhaps no more than the hundredth part . . . It is one of the largest and most commodious ports in the world.”¹³¹ Pepper arrived from the Malabar coast, as well as from Sri Lanka and Indonesia, where pepper cultivation had been well established already during the twelfth century. China also received spices from the Moluccas; perfumes (incense and myrrh from Arabia, *costus* from northern India, camphor from Sumatra); dyes and cotton fabrics from Gujarat, Bengal, and the Coromandel coast (see above). Also imported were diamonds from the Deccan, sapphires and rubies from Sri Lanka, pearls from the Persian Gulf and the Coromandel coast, and from East Africa, ivory and slaves – Ibn Battūta notes that the latter were employed as gatekeepers in the country’s largest cities. From South Asia and Southeast Asia also came turtle shells, rhinoceros horns and coral, as well as kingfisher and peacock feathers (Deng 1997: 114). “More than in Muslim and Hindu polities, the importation of foreign rarities played a symbolic part in the maintenance of the authority of the Chinese regime” (Digby 1982c: 135).

The Chinese primarily exported ceramics, textiles, metal products, lacquer, and paper.¹³² Porcelain of the “blue-and-white” type developed during the first quarter of the fourteenth century. “Cobalt blue was imported from Persia, probably by Persian merchants living on the Chinese coast. From the outset, most of this ‘blue-and-white’ porcelain was exported to India, central Asia and the Muslim world” (Carswell 1998: 672).¹³³

On Quanzhou, a new narrative saw the light in 1997, in the form of a manuscript credited to the Jewish merchant Jacob of Ancona, who purportedly sojourned in Quanzhou in 1272. The way in which this manuscript was discovered (it may be a copy dated to the fourteenth century) and the publication of an English translation have aroused the skepticism of most researchers, although Luang Lianmao, director of the maritime museum at Quanzhou, has vouched for the document’s authenticity.¹³⁴

Chinese junks, owned by private merchants, visited Southeast Asia, India (Quilon and other ports) and sometimes more distant ports such as Hormuz (Hourani *et al.* 1951: 50). In 1291, on Küblai Khān’s order, Marco Polo may have accompanied

¹³⁰ Marco Polo 1980: 372–373. “The merchants who import goods into the city, as those who carry them from thence to the interior, or who export them by sea, pay, in like manner, a duty of three and one third per cent; but goods coming by sea from distant countries and regions, such as from India, pay ten per cent” (Marco Polo 1982: 247). For silk, 10 percent was for the government. “The revenue of his majesty, that arising from salt, amounted to the sum of two hundred and ten tomans per year (each toman equal to eighty thousand saggi of gold), or sixteen million eight hundred thousand ducats” (Marco Polo 1982: 247).

¹³¹ Marco Polo 1980: 385; 1982: 253. The name “Çaiton” derives from the Chinese “Citong,” which referred to Quanzhou (from the name of a tree with red flowers) (Chen Dasheng and Lombard 1988: 22).

¹³² Deng 1997: 114. The three books *Zhufanzhi*, *Daoyi zhilue* and *Zhenla fengtuji* mention ceramic exports to 64 destinations, textiles to 85 and metal products to 134 (Deng 1997: 115).

¹³³ Blue-and-white porcelain was already being produced, in small quantities, during the Tang dynasty and later, the Song dynasty.

¹³⁴ The manuscript, kept at Urbino in Italy, has been seen only by D. Selbourne, under mysterious conditions. It has been translated but not reproduced. Many scholars have spoken of a “literary hoax” (Boulnois 2008: 356ff.).

a Mongol princess to Iran. Chinese merchants settled in ports along the Indian coast. A chronicle written by Zhou Daguan (1266–1346) shows the existence of Chinese communities in Champa, Cambodia, Sumatra, and Java. Ventures brought together the state and private traders: the Yuan government provided ships and capital for merchants wishing to trade abroad; “profit was shared between the two parties according to a 7:3 ratio” (Deng 1997: 86). Around 1376, a Chinese merchant, Lin Nu, visited Ormuz, converted to Islam, and married a Persian or Arab woman whom he brought back to Quanzhou, in Fujian.

During the fourteenth century, Canton and, more importantly, Quanzhou were China’s major international trading ports, well before Qingyuan (Ningbo), Ganpu (Hangzhou), and Shanghai. The Arab traveler Ibn Battūta writes that the port of Zaitun (Quanzhou), which he claims to have reached in 1343, is the biggest in the world:

It is a huge and important city in which are manufactured the fabrics of velvet, damask and satin which are known by its name. Its harbor is among the biggest in the world, or rather is the biggest. I have seen close to one hundred big junks there and innumerable little ones. (2002: 264)¹³⁵

Our traveler mentions the existence of a rich Chinese merchant class: “Some of the Chinese own large numbers of ships on which they send their commercial agents to foreign countries. No people in the world are wealthier than the Chinese” (Ibn Battūta 2002: 224). He also writes of the presence of many foreign traders in China. For the city that he calls “Khansā” (Hangzhou), Ibn Battūta signals that a quarter of the city is “inhabited by Israelis, Christians and sun worshipping Turks.” No other part of this city was “occupied by Muslims,” who were 40,000 families in all (Ibn Battūta 2002: 333).

The Muslim merchant networks, in which the Chinese were active, held a significant place. All the great Chinese ports housed foreign Muslim colonies, which had their own quarters and enjoyed extraterritorial rights. A Muslim appointed by the emperor of China was at their head.

At this time, Quanzhou was the largest Muslim center. Much of its population was composed of foreigners or partially assimilated communities. Among the Muslims, who lived in a separate borough of the city, Ibn Battūta notes the large size of the Persian colony; one of its notables came from Isfahan, and another from Tabriz; Ibn Battūta also mentions “Borhān eddīn alcāzerūny, who owns a hermitage outside the city. It is to him that the merchants pay the offerings they want to make to the shaikh Abū Ishak of Cāzerūn”¹³⁶ (it is likely that Persian Muslims provided Ibn Battūta with the data on China). The Ashab mosque, founded in 1009, was restored in 1310–1311 by a man from Shiraz called Haji Rukh. Some of the tombs in the Muslim cemetery at

¹³⁵ From Hangzhou, Ibn Battūta claims to have reached Beijing via the Great Canal, but the veracity of this voyage has been questioned (see Yerasimos 1980: 49). It is possible that Ibn Battūta, in fact, never set foot in China (Hirsch and Fauvelle-Aymar 2003: 92). His China account would appear to be an assemblage of several different narratives.

¹³⁶ Ibn Battūta 1982, 111: 323–324. This sheikh Abū Ishāq “is highly venerated by the people of India and China. Travelers on the China Sea make a practice when the wind turns against them and they fear pirates, of making vows to Abū Ishāq, and each one of them sets down in writing the obligation he has undertaken in his vow . . . There is not a ship that comes from China or from India but has thousands of dinars in it” (Ibn Battūta 1959, 11: 320).

Ling-shan (Quanzhou) date back to the thirteenth or fourteenth century. The majority of the epitaphs referring to Persians date to the fourteenth century. A stela bearing Arabic script, dated to 1322, commemorates the passage of a group of pilgrims. A Chinese text dated to 1350 tells us that there were “six or seven mosques in the city” of Quanzhou (Chen Dasheng and Lombard 1988: 28).

Besides this powerful Muslim community, the epigraphs recovered at Quanzhou show the presence of Hindus. Statues (often of Vishnuite inspiration), low-relief carvings and architectural elements, difficult to date, belonged to one or several temples. The discovery of an inscription in Tamil script has already been mentioned. South of Quanzhou, carved in a rock wall “at the back of an oratory converted to Buddhism,” an effigy of Mani reveals the existence of a small Manichean community.¹³⁷ Funerary monuments bearing crosses show the presence of Nestorian Christians. Several churches were built in Quanzhou.¹³⁸ The Franciscans established a *fondaco* where Christians could stay: this shows the significant number of European merchants, mostly Italians, who traveled to China (Lopez 1952: 312). A bishopric was established at Quanzhou in 1308.

While foreigners were numerous in China, the Yuan period also saw the formation of sizeable Chinese communities abroad. Until the first third of the fifteenth century, the Chinese were present, not only in Southeast Asia, but also in the Indian Ocean, particularly in India. Ibn Battūta, as an envoy of Muḥammad ibn Tughlūq, boarded a junk to sail from India to China, and focused many of his observations on Chinese maritime activity during the mid-fourteenth century. Ibn Battūta notes that ships from China “enter the port [of Hily = Madayi], as well as Kawlam and Qaliquṭ.”¹³⁹ During his stay at Calicut, Ibn Battūta observed “thirteen Chinese vessels” anchored in the port. Before the middle of the fourteenth century, Wang Dayuan, from Quanzhou, traveled over the Indian Ocean aboard Chinese ships, from Southeast Asia to the Arabian Sea and East Africa; in 1349, he wrote an account in which he described the Comoros and Madagascar.¹⁴⁰ During the Yuan period, printed sailors’ manuals, sea travelers’ maps and sea charts were in common use (Deng, 1997: 55).

Chinese junks surpassed Indonesian or Indian ships at this time. “On the sea of China, traveling is done in Chinese ships only” (Ibn Battūta 2002: 223). Ibn Battūta believed that junks were built only in southern China, at Zayton and Şīn-calān “(which is Şīn as-Şīn)” (Canton?), but the construction techniques probably spread to Southeast Asia and India, particularly Malacca and the Gulf of Bengal (see above). Moreover, “in view of the dominant position of Muslim merchants in South China, under the late Song and Yuan dynasties, we should assume that such vessels were commissioned from southern Chinese shipwrights” (Digby 1982c: 130). Some junks

¹³⁷ Chen Dasheng and Lombard 1988: 27. See Pelliot 1923. Manichean communities were present in China until the fourteenth century; they disappeared during the fifteenth century.

¹³⁸ “In 1326, Andrea da Perugia, sent by the Pope as the third bishop in Quanzhou, reported that a rich businesswoman from Armenia had donated a large sum of money to build a magnificent church and to maintain another” (Deng 1997: 154).

¹³⁹ Ibn Battūta 2002: 222. He adds: “Caoulem is the nearest of the Mulaibar towns to China, and it is here that most of the merchants from China come” (2002: 226).

¹⁴⁰ *Records of Overseas Countries and Peoples (Daoyi zhilue)*, based on the notes taken during his many voyages in Southeast Asia (Devisse 1985: 717; Deng 1997: 15).

may have been very large: Marco Polo mentions crews of 200 to 300 men, Ibn Battūta writes of 1,000 crew members, and the Franciscan Odoric of Pordenone traveled on a junk with 700 passengers. Ibn Battūta describes three kinds of ships: “large ships, called junks ; middle-sized ones called *zaw* ; and small ones called *kakam*.”¹⁴¹

The large ships have anything from twelve down to three sails, which are made of bamboo rods plaited like mats. They are never lowered, but they turn them according to the direction of the wind . . . A ship carries a complement of a thousand men: six hundred of whom are sailors and four hundred men-at-arms, including archers, men with shields, and arbalists, that is, men who throw naphta. Each large vessel is accompanied by three smaller ones, the ‘half’, the ‘third’ and the ‘quarter’. These vessels are built only in the town of Zaitun [Quanzhou], or in Sin-Kalān, which is Sin As-Sin [Canton]. Their method of building the ships is to construct two walls of timber, the space between which they fill up with immensely large baulks of wood fastened both in length and breadth by huge nails each of which is three cubits in length. When the two walls are firmly joined together by these baulks they build on top of them the lower deck of the vessel, and launch them into the sea, where they complete the construction of the ship . . . In the vessel they build four decks, and it has cabins, suites and salons for merchants. A set of rooms has several rooms and a latrine . . . The sailors have their children living on board ship, and they cultivate green stuffs, vegetables and ginger in wooden tanks. (Ibn Battūta 2002: 223–224)

The term “junk,” Arabic *jung*, plur. *junūq*, is related to the Malay or Javanese *jung* or *jong*, which – via a southern Arabic dialect – has yielded the Italian *gionco* in L. di Varthema, transcribed as *gionchum* in Grynœus and Huttich (1532), and *gonchium* in Herr (1534). The oldest mention of the term in Europe, however, may be in the works of Odoric of Pordenone, who dictated the report of his journeys in 1330 (Mahdi p.c.). Later on, one finds *joncken* and *juncken* in Dutch and German texts dated to the seventeenth century (Mahdi 2007: 28ff., 221). Russell Jones (2007) gives the word *jüng* in Chinese, as spoken in Ningbo. This term is first attested in an inscription in Old Javanese dated to the ninth century (Manguin 1985a: 24 n, 50).

The use of iron nails, noted by Marco Polo, sets the Chinese vessels apart from ships of the Malay world and the Indian Ocean. Some Southeast Asian ships and perhaps those from the eastern Indian Ocean, however, were using nails during the fourteenth century, as shown by shipwrecks dated either to this period or to later centuries (Manguin 1985a: 17). In fact, exchanges resulted in the development of what might be called “hybrid ships.”

Chinese junks sailed directly to the Ternate and Tidore islands in order to acquire cloves via a route spanning the Sulu archipelago. According to Wang Dayuan, “They [the people from Ternate and Tidore] look forward each year to the arrival of Chinese junks to trade in their country” (Rockhill 1915: 259; Reid 2006: 18).

Some authors have alleged a decline in Chinese activity toward Southeast Asia after 1330, a decline that may have benefited Indonesian states such as Mojopahit. Ibn Battūta claims to have seen a junk belonging to the king of “Jawah” (king of Pasai, northern Sumatra) at Zaitun, whose crew was composed of Muslims. The sultan gave him “a great deal of aloes, camphor, cloves and sandalwood” and the Moroccan traveler

¹⁴¹ The term *zaw* may derive from the Chinese *sao* or *tsao*; the term *kakam* from the Chinese *hoa-hang* or *hoa-ch’uan*. Great vessels were usually accompanied by smaller ships.

later embarked aboard another junk headed to Quilon from Sumatra (Ibn Battūta 2002: 274).¹⁴² A decline in Chinese foreign trade, corresponding to the country's domestic deterioration (see below), became marked after 1357. In this year, the garrison of Persian soldiers at Quanzhou revolted and took control of South Fujian. They failed to capture Fuzhou, collapsed into internal conflict and were militarily crushed at last, in 1366. "Then a witch-hunt began against the Muslims at Quanzhou" and elsewhere. The anti-Muslim violence stopped only in 1407, by order of the Ming emperor Yongle (Reid 2006: 17).

Ming China and the Confucian Ideal (1368–)

Alas, how easily money and profit can bewitch a person! Is it really so difficult to reject the temptation of money?
(Hongwu's proclamation; Buckley Ebrey 1993: 206)

The situation worsened as of 1327 in Yuan China, a time when Yellow River floods were triggering famine in the north (in 1344 especially). Plague wiped out a large part of the population in regions such as Hebei (1331). The disastrous depreciation of paper money during the 1340s and 1350s coincided with a spectacular rise in the price of silver. The inflation of paper money, the administration's corruption and the worsening of the peasants' living conditions led to disorders organized by secret societies such as the Red Turbans (1351–1366).¹⁴³ One chief of a secondary uprising, the son of an agricultural worker from Anhui, succeeded in overthrowing Yuan rule, and proclaimed himself emperor under the name of Hongwu, thus founding the Ming dynasty in Nanjing in 1368. The Yuan dynasty, open to influences from abroad, had often appointed foreigners to administrative positions. The revolt establishing the Ming dynasty and putting the Mongol era to an end was in part a Chinese nationalist, neo-Confucian reaction.¹⁴⁴ Many Mongols, however, became integrated into the Ming Empire, which adopted Yuan institutions such as the garrison system, staging posts, and municipal schools (Kerlouégan 2009b).

Until his death in 1398, Hongwu's reign was a period of reconquest of the country as well as rehabilitation of land, bridges, dikes, dams, and canals (the Great Canal, in particular, was improved). The empire had been weakened by Mongol exploitation and a long period of disorders. Sustained effort would be required in order to restore China's agrarian economy and economic balance. Hongwu had more than 40,000 water tanks built in order to improve the irrigation of rice fields. A vast program of reforestation was implemented, and a billion trees were planted. "Large areas of land were restored to cultivation and the devastated regions were systematically repopulated

¹⁴² Remember that Ibn Battūta, in reality, had probably never been to China, but he collected his information from Muslims familiar with that country.

¹⁴³ Korea then regained its independence, during the 1350s.

¹⁴⁴ In 1364, however, the future emperor Hongwu, who had not yet reunified China, relied on a merchant of foreign origin to set up an "office of maritime affairs" in Taicang, near Shanghai, "in order to promote external trade" (Salmon 2004: 51). G. Deng (1999: 257) has rightly pointed out that the rebellions in China were the signs of "disequilibrium" in the physiocratic and Confucian order, and were usually "reactionary and conservative." As V. Lieberman argues, it is probably true that "the Inner Asian threats stimulated a pan-Chinese identity" (2009: 611).

by transfers of population. Immigrants received extensive plots, and benefited from state aid and from tax exemption for many years” (Gernet 2002: 390–391).¹⁴⁵ The system of military colonies, already known under the Song, allowed for the cultivation of new lands. The emperor organized the defense of the northern borders, against the Mongols; he also put a policy of coastal defense in place; small forts were built and a fleet was set up (Calanca 2010).

Hongwu also re-established the previous exam system for recruiting officials. A new system of population registration for *corvées* and other services (*lijia*) provided a basis for taxation. A new fiscal administration was also set up, to provide better tax collection. Most of the state’s resources now came from farmers. Taxes on salt were reduced. The empire’s monetary policy was rather erratic; after issuing limited quantities of bronze coins, in 1375, the government went back to issuing non-convertible paper money as a means of exchange and a means of payment for taxes. This paper money depreciated rapidly due to over-issuance, and to its non-convertibility; in 1390, whereas the state received 20 million *guan* in paper, it spent 95 million (von Glahn 1996: 71). Despite a ban on the use of precious metals in trade (reiterated several times), silver was used not only as measure of value, but also as means of exchange, and its price shot up.¹⁴⁶ Hongwu’s reign was also marked by a process of ideological refoundation; the emperor revised rites and ceremonies, and municipal schools spread neo-Confucian ideology. The defects of the Ming system, however, were already appearing under Hongwu’s reign, which was prone to authoritarianism, a propensity toward secrecy, the centralization of all powers in the hands of the emperor, and the use of state terror: between 1376 and 1393, nearly 100,000 executions were ordered. The emperor suppressed the imperial grand secretariat and placed the ministries under his sole authority: he reigned with his aides and palace eunuchs with no real organic connection to the bureaucracy, whereas “the political system of the Song had been based upon the coexistence of independent organisms which checked each other on the one hand, and of various different sources of information on the other; political decisions in that empire had been the subject of discussions in which contradictory opinions could be freely expressed” (Gernet 2002: 396). Although Hongwu wanted to diminish the wealth of large landowners, in fact, an elite of landowners emerged, triggered by the granting of large estates to influential individuals during the first Ming period. These local notables would later enjoy increasing influence. Occupations were inherited (soldiers, farmers, artisans, and merchants), according to the Mongol system; this organization, however, could not be maintained during the fifteenth century. Dissemination of information and human mobility were matters of special concern: a postal service and a transport service were set up; Shāh Rukh’s embassy witnessed their efficiency in 1420–1422 (Brook 1998: 34ff.). China developed an

¹⁴⁵ The Ming government was a significant landowner until the middle of the fifteenth century: it “had confiscated a good deal of land in the Yangtze valley” (Pomeranz 2000: 71). As early as the Tang period, the Chinese authorities promoted geographic labor mobility and the colonization of bordering lands; they “guaranteed land to migrants and often paid their ‘travel expenses’, all or part of their draft animals, and seeds, supplementing all this with start-up loans” (Norel 2005; Marks 1998: 291).

¹⁴⁶ According to R. von Glahn (1996: 75), Hongwu’s policy, hostile to money, was part of a package of measures geared toward punishing the rich owners of Jiangnan, who had not supported Hongwu during the civil war, and whom he burdened with taxes. “The four most heavily taxed” districts were those of Suzhou, Songjiang, Jiading, and Huzhou (Brook 1998: 78).

armaments industry, and – curiously – Korea was able to acquire guns in the 1370s. These were installed on ships in order to resist Japanese naval attacks: the Ming Empire appears to have considered Japan as a threat to its own security.¹⁴⁷ The state also encouraged the development of the silk industry: in 1394, an edict was promulgated which forced farmers to plant mulberry trees.

Within this context of neo-Confucian reconstruction, the Ming dynasty sought to restrict private trade in long-distance exchanges, and to return to an official “tributary” system or more precisely maritime trade disguised as a tributary system.¹⁴⁸ Customs offices were set up once again at Canton, Quanzhou, and Mingzhou. Mingzhou welcomed tributary missions from Japan and Korea; Quanzhou welcomed missions from Ryukyu, while Canton focused on missions from the southern seas. Goods brought in by merchants accompanying foreign embassies were “subject to a 60 percent tax” (this corresponded to preferential government procurement paid at market prices) (Calanca 2010, quoting the *Xu wenxian tongkao* by Wang Qi, compiled in 1586). These customs offices were closed in 1374, and reopened under Yongle at the beginning of the fifteenth century (Salmon 2004: 52). Following the Quanzhou rebellion, the Ming manifested outright hostility toward Muslims. Alongside Quanzhou’s decline, trade toward the southern seas decreased (Reid 2006: 19). It was not until the fifteenth century that China’s trade blossomed once again. The Chinese communities of Southeast Asia were then cut off from their country of origin and mixed with indigenous people.

In order to have its new political power recognized and also to establish commercial contacts, the Ming emperor sent missions to Southeast Asia and to the Chola country and the Coromandel coast, in 1369 and 1370; the Chola themselves sent an embassy in 1372 (Pelliot 1933: 328). Relations developed again with Japan, after a long dry spell. The decrease in trade between China and Japan noted by the early fourteenth century may have had a hand in the collapse of the Kamakura *bakufu* in 1333. At that time, the Japanese government was unable to prevent local powers from emerging; these local powers were themselves vulnerable due to poor harvests, linked to the climate changes affecting the entire Northern Hemisphere. With the help of the Ashikaga clan, Emperor Go-Daigo overthrew the Kamakura *bakufu* in 1333 and sought to re-establish the authority of the emperor and the court nobles, as well as Confucian practices, during the period of the Kenmu restoration. In 1336, however, Ashikaga Takauji designated another emperor in what would become the northern court. Now divided between the northern and southern courts, Japan entered a long period of instability and conflict under the Muromachi *bakufu*, until 1392, when the north took the upper hand. During the late fourteenth century, the Ashikaga *shogun* Yoshimitsu (1368–1408) re-established trade links with the Ming. Under his reign, however, the government gradually lost control over the peripheries of

¹⁴⁷ A Chinese expert was sent to Korea by the Ming emperor (Pacey 1990: 73).

¹⁴⁸ While “tribute was a ritual expression of [foreigners’] inferiority and of the superiority and beneficence of the emperor” (Pearson 1991: 102), it was also a screen hiding commercial exchanges.

its territory. “The Ashikaga government [marked] the ultimate disintegration of the *ritsuryō* system, the transfer of power from courtiers to warriors, and the final eclipse of central by local power” (Lieberman 2009: 408). As the imperial structures were breaking down, the *shōgun* set up a network of military governors (*shugo*).

Many missions from Ayuthiā (Thailand) also arrived in China during the last third of the fourteenth century. One of these missions brought in six tons of pepper and sixty tons of sapanwood.¹⁴⁹

Chinese restrictions on private trade paralleled the development of “contraband” or “piratical” activities, in China and the neighboring coasts – partly the merchants’ reaction to these restrictions. The Chinese “smugglers Zhang Ruhou and Lin Fu had twenty oceangoing ships operating in Champa.”¹⁵⁰ Of course, merchants resisted maritime bans: maritime trade brought profits that could reach 1,000 percent during the Song period and were still between 500 and 1,000 percent under the Ming in trade with Southeast Asia, while “the average profit from the sino-south Asian trade was only 150 percent” (Deng 1997: 110).¹⁵¹

China’s trajectory had been changed by the Mongol invasion. The Mongols, however, accentuated the Chinese southward-oriented trade. While this trade slowed during the downturn of the world-system, it developed with renewed vigor during the early fifteenth century, encouraged by the new policy of Emperor Yongle. This trade was directed toward Southeast Asia, and more importantly India, at the core of the Indian Ocean.

Now more strongly linked to China than it had been during preceding phases, the Indian subcontinent followed the rhythm of the world-system; however, as had been the case during the first millennium, its situation was more complex than that of other regions, due to its geography. Various competing powers sought unsuccessfully to take the upper hand, before the Delhi sultanate nearly succeeded in uniting the subcontinent, for a few decades. As in other periods, the coasts of the Bay of Bengal appear to have been less affected than other regions of the world-system by the recession of the fourteenth century.

¹⁴⁹ Deng 1997: 86: “Salaries and wages of [Chinese] officials and soldiers were sometimes paid in sapanwood and pepper instead of cash or grain.”

¹⁵⁰ Deng 1997: 75. True piracy, however, was limited by the Ming navy during the fifteenth century. By contrast, piracy would later expand spectacularly during the sixteenth century (Gernet 2002: 418) (see also Deng 1997: 90–91).

¹⁵¹ During the Han period, already, “according to the (*Hou*)*hanshu*, returns from trade between China and the Roman Empire, Iran (Anxi), and India (Tianzhu) were as high as tenfold” (Deng 1997: 110).

India: From the Chola Empire to the Delhi Sultanate

The great province of Maabar is the best in all Indias . . . It is the noblest and richest country in the world.
(Marco Polo 1980: 424; 1982: 283)

What is carried to the west that the merchants going to Aden take in their vessels is then transported to Alexandria; however, these vessels are hardly one in ten compared to those sailing [from India] to the east.
(Marco Polo 1980: 468)

At the end of the tenth century and during the early eleventh century, the Turkish Muslim dynasty of the Ghaznavids, founded in 977 by Subuktigīn, son-in-law of a Samanid governor of Balkh, reigned in Afghanistan and later on in the Iranian Khorasan, where the Samanids were defeated. The decline of the Gurjara-Pratihāra from Kanauj was an accomplished fact following invasions by Maḥmūd from Ghazni (999–1030), who looted the regions between Gujarat and Vārānasī (Benares) between 1001 and 1027; these regions were primarily ruled by the Chāhamāna and the Chandelā.¹ The Gurjara-Pratihāra disappeared and the Rajput Gahādavala dynasty (1046–1202) then dominated Kanauj and Benares, while the Paramāra reigned in Malwa. The Ghaznavids annexed Punjab, founding the city of Lahore in 1022. This process would later lead to the creation of the Delhi kingdom by the Ghurids – Turco-Afghans who succeeded the Ghaznavids – during the twelfth century. The tenth and eleventh centuries saw political fragmentation in northern India, as well as a relative economic weakening in some regions. Daybul and Sindh were thus in decline during the eleventh century; yet trade remained active in Gujarat, which was ruled by the Solanki (Chālukya) dynasty of Anahilavāda (942–1243), as well as along India's western coast. The coast of Konkan was controlled by two branches of the Shilahara lineage, and by the Kadamba of Goa: these were vassal dynasties under the Chālukya of Kalyāna. In Bengal, moreover, a revival of the Pāla kingdom occurred at the beginning of the eleventh century. However, the Pāla disappeared during the twelfth century in favor of the

¹ The wealth of the plunder (70 million Shāhi dirhams) mentioned by al-'Utbī (a Ghaznavid chronicler), after the storming of Bhimnagar (Punjab) in 1009, may have been 136 tons of silver (Richards 1983c: 189; Deyell 1999: 57). Bhimnagar was the last refuge of the king of the Shāhi dynasty. Deyell points out the influence of Afghan currency between the eighth and tenth centuries: it was felt “as far as the Baltic Sea” (1999: 65). According to Ferishta, Maḥmūd returned from expeditions against Kanauj and Mathurā with “twenty million dirhams worth of gold and silver bullion” (Wink 1997: 124).

Sena dynasty, which would control Assam and part of Orissa by the end of the century. Between the tenth and twelfth centuries, besides Gujarat and the Chālukya Empire of the Deccan, the dominant power in India was located in the south, where the Chola kingdom flourished. “Indian territories, particularly in the south, fused vernacular culture with royal authority” (Lieberman 2009: 722); however, these regional “fusions between power and culture” were short-lived, partially because of the Inner Asian invasions and the expansion of the Delhi sultanate (Lieberman 2009: 729).

Gujarat and the Western Coast of India

The Solanki dynasty of Anahilavāda gave Gujarat remarkable political stability until 1243; this went along with a thriving economy, especially under King Siddharāja Jayasimha (1094–1143). The region exported textiles, indigo, sugar, hemp, spices, wood, leather products, slaves, semiprecious stones, and metallic objects. It imported precious metals, ivory, incense, spices, and horses. “The brisk commercial activity in western India led to the emergence of a prosperous and powerful class of merchants which tended to dominate the political, social and economic fabric of the region” (Jain 2001: 344). As in the rest of India, merchants “were appointed to the *panchakula* [“Five families”] or committees that supervised the administration not only of urban centers, but also, at times, of larger rural areas” (Thapar 2004: 461). Jains, Prāgvaṭa in particular, held political offices at the Chālukya court of Gujarat; the Jain Vimal Shāh became minister to King Bhima I (eleventh century).² The influence of the Jain led to the conversion of King Kumarapāla in 1164. Kings and great merchants were linked by financial interests; V. K. Jain gives the example of King Siddharāja calculating the amount of funds he could borrow from a merchant in order to raise an army against Malwa (quoted by Chattopadhyaya 2001: 307 n. 105). Muslim merchants were welcomed by the rulers and formed large communities in the trading ports. The Chālukya government had a “department of ports” and a “department of commerce.” The state issued silver coins alloyed with copper, called *gadhaiyā*; these continued the tradition of the earlier Indo-Sassanid coins. A transregional trading currency, these coins have been found in Rajasthan, Sind and along the coast of Konkan (Deyell 1999: 114ff., 188).³ As the Shāhī dynasties had done in earlier times, the Chālukya would maintain a stable silver content for the *gadhaiyā*. Deyell (1999: 240) rightly notes that “the kingdoms which were most successful in maintaining the net precious metal content of their coins, were the most closely involved in trade.” We observe the same phenomenon for the issues of the Tomara and the Chāhamāna of Delhi.

Interregional trade developed with Malwa, Rajasthan, and the Ganges valley. For Rajasthan, Chattopadhyaya (2001: 304, 308, 311) notes “the resurgence of local merchant

² The Jains formed the bulk of the merchant community. They were also influential in Karnataka, especially under the Rāshtrakūta and later the Hoysala. The great merchants were often financiers, who were active in local administration. While the social ascent of merchants contrasts with the low status of artisans, production did increase during the eleventh and ensuing centuries. Some independent craftsmen, however, managed to climb the social ladder.

³ At the end of the twelfth century, “Auḥi relates the story of a prominent citizen, Anhilwada Pattan, who traded with Afghanistan, and who had assets of a million silver coins in Ghazni” (Deyell 1999: 127).

lineages in the eleventh and twelfth centuries,” which were “integrated into intra- and interregional networks,” as well as links of merchant groups with political centers and authorities. Horses were necessary to the armies of the various states, and merchant groups such as the Heḍāvika were specialized in horse trading (there is an inscription dated to 973 in the Shikar region). It appears that local merchant associations were active in collecting taxes, part of which went to the political elites; K. R. Hall (1980) has also noted this for the Chola kingdom. Inscriptions dated to the eleventh century in Rajasthan attest to the use of coins and cowries. Silver was commonly deposited in religious institutions.

In addition, Gujarat was active in Indian Ocean trade. Al-Bīrūnī (eleventh century) pointed out the importance of Sōmanāt (Somanath) as a port of transit for sailors plying the seas between Africa and the Orient:

The port of Somanāth has become so successful because it is . . . a stopping point for people traveling between Sofala and the Zanj country and China. (Ferrand 1907: 552)

During the thirteenth century, Cambay would replace Broach (Bharuch) as the main port of Gujarat.⁴

Further south, the coasts of Konkan and Malabar also took part in Indian Ocean networks. The region kept up significant trade with the Persian Gulf, and its relations with South Arabia and the Red Sea intensified. Letters found in the Geniza of a Cairo synagogue reveal contacts made by merchants from Egypt and Yemen (Jews and Arabs) with those from South India (Jews, Arabs, and Indians). These documents mainly belong to the eleventh and twelfth centuries, and for connections with India, the period 1080–1160.⁵ During the eighth century, the example of a man called Issupu Irappan (Joseph Raban) reveals the integration of Jewish merchants in South India and the respect they enjoyed. At the head of the Anjuvannam guild, Raban “obtained princely privileges, exemption from all taxes and the grant of the revenue of a trader’s quarter of the port of Cranganore on the Malabar coast” (Kulke and Rothermund 1998: 126). In “exchange,” Raban made his ships available to the Chera king. The Geniza documents indicate exports of iron, steel, copper vessels, and diamonds from Deccan during the eleventh and twelfth centuries. Gujarat exported primarily dyes⁶ and cotton or silk fabrics, while the Malabar coast sent spices and aromatics, wood, pearls, and precious stones.

Chaudhuri has convincingly demonstrated the segmentation of trade into three areas from the tenth or eleventh century onward: these areas were the western Indian Ocean, the eastern Indian Ocean, and the China Sea. The ports of Gujarat, the Malabar coast, Coromandel and the Straits of Malacca functioned as intermediaries (where merchandise was transshipped) and acted as hubs, a situation due partly to conditions of navigation with monsoon winds.⁷ Curiously, however, by writing that “the Indian lack of interest in sea-power during the pre-modern period remains

⁴ Cambay is already mentioned by Ma’sūdī as a significant port in 915.

⁵ It is possible, as Goitein suggests (1967: 148), that the naval supremacy of Christians in the Mediterranean during the twelfth century encouraged some Jewish merchants to expand their activities in the Indian Ocean.

⁶ Zhao Rugua and Marco Polo have pointed out the large quantities of indigo exported by Gujarat. The indigo plant was also cultivated in Yemen and in Egypt.

⁷ Chaudhuri 1985: 49, 104 (map 12). This is nothing really new: as previously noted, this segmentation was already effective during the sixth century, at the time when Cosmas Indicopleustes notes the role Sri Lanka played as entrepôt.

distinctly enigmatic,” Chaudhuri underestimates the military and commercial role played by the Indians on the sea.⁸ The Sanskrit manuscript *Yuktikalpataru* mentions as many as fifteen kinds of seagoing ships, some of them of large size.⁹ Abū Zayd notes the presence of Hindu merchants at Sirāf during the tenth century. Inscriptions dated to the eleventh century along the Konkan coast describe *vahitra* ships, used for voyages on the high seas. These vessels seem also to have been in use in the Bay of Bengal (the Bengali language has a term *bahitra*, “ship,” found in Malay under the form *bahatra*, from the Sanskrit *vahitra*).¹⁰ Sea battle scenes depicting the Shilahara of northern Konkan opposing the Kadamba of Goa are found in the Borivli caves, near Mumbai (twelfth century). Other scenes are featured on commemorative stones (twelfth–thirteenth centuries). A stone kept in the Goa Museum shows a ship with a rudder attached to the stern; this ship appears to be sitting in a shipbuilding yard.¹¹ Idrīsī writes of the presence of *meshiat* at Qays, a term which corresponds to the *mashwa* or *machwa* that the Europeans would later describe on the coasts of Gujarat and Konkan (Chakravarti 2002a: 46; Deloche 1996). Inscriptions dating to the late eleventh century found in southern Konkan mention a rich family of shipowners (*nauvittaka*) at Balipattana. Various inscriptions dated between the tenth and thirteenth centuries mention the shipmasters of Candrapura, to the south of Goa. The documents from the Cairo Geniza relate the activity of *nauvittaka* originating in India. In 1145, a Jewish merchant from Mangalore, Mahruz, asked an Indian shipowner (*nākhudā*) from Mangalore called Tinbu to give a letter and money to his brother-in-law, Judah, at Thana.¹² Another Geniza letter from 1139 describes two vessels belonging to

⁸ Chaudhuri 1985: 15. Chaudhuri, however, shows the significance of the Gujaratis and the Dravidians. A. Wink (1990: 65) repeats Chaudhuri’s idea according to which “there is little mention of Hindus in the long-distance trade of the Indian Ocean.” B. Rosenberger (2000a: 271) also incorrectly writes that “the Hindus did not venture very far from their shores.”

⁹ Mookerji 1999 [1st edn. 1912]: 15–16. It is interesting that this Sanskrit book, dated to the eleventh century, is attributed to a king, King Bhoja (Malwa).

¹⁰ The *Dasakumacarita* written by Dandin (seventh century) “gives Tamralipta [Bangal] as a port (*velukala*) where came *vahitras* of the Yavanas” (Chakravarti 2012: 82). A document from the Geniza uses the term *jahaj* for a ship sailing from Mangalore to Diu.

¹¹ Chakravarti 2002a: 44. According to Deloche (1996: 212), the sternpost rudder observed was probably not an Indian innovation, as China had known this type of rudder since the first century. According to Manguin, however, “we do not really know how these rudders were fixed onto the sternpost, and a Chinese influence is unlikely (Chinese axial rudders were suspended from above [by a rope tackle system]); instead, we can think of traditions common to the Mediterranean and to the Indian Ocean” (p. c.). Deloche (1996) notes that the invention of the median rudder permitted an advance in shipbuilding and an increase in vessel size, although we do not observe this in the representations of boats of this period (while the period from the second century BCE to the seventh century CE does show three-masted ships, during the eleventh–twelfth century, the ships depicted have only single masts). The Indian boats of this period were probably fore-and-aft rigged vessels, able to sail upwind.

¹² Judah had been attacked by pirates on the coast of Konkan. Pirate activity had been signaled over the centuries along the coasts of Konkan and Malabar. Marco Polo writes of complicity between the ruler of Thana and the pirates operating along this coast. On the eastern coast of the Indian peninsula, in Andhra Pradesh, in 1245, King Ganapatideva promulgated an edict to ensure the eradication of piracy in the port of Motupalli. Mahruz says this about Tinbu: “Between him and me there are inseparable bonds of friendship and brotherhood.” Mahruz had heard of the misfortunes of his brother-in-law from a Muslim cotton trader, Sheikh Abu’l Qasim ibn Qattan. Judah was the representative of the Jewish merchants in Cairo (Chakravarti 2002a: 55, citing Goitein 1973: 62–65).



Figure 8.1 Ship featured on a *paliya* memorial stone, Konkan coast, India, fourteenth or fifteenth century. Bhuj Museum, photo J. Deloche (Deloche 1996: 221)

a *fatanswami* (cf. Sanskrit *pattanaswami*, “lord of the port”), sent from India to Aden, with pepper and iron, and the arrival from Malabar of a ship owned by a *fadiyar* (“a title similar to *fatanswami*”).¹³ This *fadiyar* owned several vessels, one of them commanded by a Muslim (Goitein and Friedman 2007: 24). India built ships, and was also the main supplier of wood and coir for the shipbuilding yards of the Persian Gulf and the Red Sea (Chakravarti 2002a: 47).

The Chālukya Empire of Kalyana

As already mentioned, part of the western coast of India, at the start of the second millennium, was under the suzerainty – more or less effective – of the Chālukya, whose capital was at Kalyāna as of 1042. This empire reached its peak under King Vikramaditya VI (1076–1126), who was victorious over the Chola king Kulottonga I. Vikramaditya was also renowned for his sizeable donations to religious institutions, and his sponsorship of artists and scholars. These donations were one way of acquiring support, by redistributing wealth. Moreover, tracts of land were granted in return for military service – a practice also reported in Orissa (Singh 2008: 574). The empire was very weakly centralized: the great provinces (*mandala*) were often autonomous regions paying tribute. In the rural areas administered by the empire – the same would later hold for the Hoysala kingdom – state-appointed *gavunda* landowners were responsible for collecting taxes and supplying troops. Taxes were primarily levied on harvests, and

¹³ Chakravarti 2002a: 53, citing Goitein 1973: 185–192. See also Margariti 2007: 145. This letter had been written by Khalaf b. Isaac b. Bundar (a cousin of Madmūn from Aden; see above) to Abraham ben Yijū, at Mangalore, a figure mentioned in other letters (see Goitein and Friedman 2007: 37ff. and below). The vessel from Malabar transported goods destined for Abraham.

on products traded, such as salt, horses, textiles, pepper, gold, perfumes, sugar, leather, paddy, and betel leaves.

The incessant wars led against the Chola – such wars were often unfavorable to the Chālukya – led to the exhaustion of the empire, which broke up prior to the middle of the twelfth century, following the defeat of the Chālukya emperor against the Kākātiya based in Andhra Pradesh. The vassal kingdoms then became independent. Two major powers later emerged: the Yādava from Devagiri in the north, and the Hoysala from Dvarasamudra in the south.¹⁴

The Chola Empire: Rice Cultivation and Long-Distance Trade

The maritime significance of eastern and southeastern India at this time was inseparable from a new political context. The military, diplomatic, and commercial activities of the Chola kings, “universal sovereigns,” formed part of an attempt to control trade routes in the Indian Ocean (in particular its eastern part) as well as ports acting as nodes along exchange networks (unlike what some authors have written, the Chola did not simply set up a “predator” state). As already mentioned, Kulam was captured under Rājarāja’s reign at the end of the tenth century,¹⁵ a move motivated by the pepper trade and commerce with Southeast Asia conducted from this port. The Chola also conquered part of Sri Lanka and the Maldives (the aim here was to control a pearl-producing region – the gulf of Mannar – which was also a major interface between the two halves of the Indian Ocean). Rājarāja’s son, Rājendra (1014–1042), looted the capital of the Chālukya, and in 1022–1023, he launched an expedition as far as the Ganges, during which he defeated the rulers belonging to the Somavamshi (Orissa) and Pāla (Bengal) dynasties.¹⁶ Rājendra founded a new capital at Gangaikonda Cholapuram.

The Chola expansion occurred within a context of agricultural progress (based in particular on wet rice cultivation, which developed thanks to local notables, thus in the Kāverī delta), and growth in crafts and trade. There is “little indication of royal involvement in the construction and maintenance of irrigation works” (Palat 2015: 49). During the early period, land grants to assemblies of Brahmins (*brahmadēya*) on Brahmana settlements boosted the agricultural sector (these Brahmins had arrived under the Pallava kings) – and perhaps also led to increased oppression of rural groups (Singh 2008: 579).¹⁷ “The *brahmadeyas* were autonomous islands in the rural landscape”

¹⁴ A. Wink points out that between 1000 and 1500, new capitals in India were often placed at the interfaces between semi-arid zones and agricultural flatlands (this would later be the case for Delhi) and at the junctions of various trade routes (2004: 95) (see also Palat 2015: 71). Lieberman also notes that it was primarily “dry-zone lineages . . . who founded new kingdoms, locating their capitals on the frontier between agrarian and pastoral zones” (2009: 682). These locations often “underlined the mutual dependence of nomads and rulers of large agrarian-commercial empires” (Palat 2015: 10–11). It was not the case in Bengal and in the Chola kingdom: these were sea-oriented countries that relied on wet rice cultivation.

¹⁵ The capture of Kulam by the Chola led to the expansion of new ports such as Calicut, which – according to a Sanskrit source – was founded in 1042 (Bouchon 1988: 50).

¹⁶ Rājendra ordered holy water from the Ganges to be carried to his capital, “where he built a huge tank containing this water as a ‘liquid pillar of victory,’” a tank comparable in design to the tanks of Angkor (Kulke and Rothermund 1998: 122, 159).

¹⁷ Certain important *brahmadēyas*, even though they belonged to a *nādu*, were “independent of the jurisdiction of the *nadu*” (Singh 2008: 576). Agrarian units, the *nādu* were often “older peasant localities

(Singh 2008: 576). Later, donations to officials fostered the emergence of a class of great landowners (Spencer 2001: 32). While Palat argues that wet rice agriculture, in India, did not encourage the formation of large estates, landownership certainly “conferred prestige and local political power” (2015: 4–5). Generally speaking, there was a shift from communal to individual landownership (2015: 4–5), and progress in private property rights at this time (Heitzman 1997: 66; Singh 2008: 579; Palat 2015: 49); the ban on the sale of land which had been donated to institutions reveals the existence of a land market. Many religious buildings were erected, and inscriptions signal multiple donations to temples, by the rulers, and also by guilds and notables – and at times by women. Land granted to institutions (*brahmadēya* and temples) was sometimes located outside the core of the empire: these grants clearly took part in a statebuilding process (Kulke and Rothermund 2004: 139). Temples, functioning as integrative institutions, stimulated the craft industry and trade, and often served as nuclei for urban centers¹⁸ (Stein [2002] writes of “third India’s urbanization phase,” which started as early as the Pallava period). The great Rajarajeshvara temple at Tanjāvūr, symbolizing the unity of the kingdom accomplished by the king, is a good example of this process (Heitzman 1997: 121ff.). The *brahmadēya* communities dominated by Brahmins kept close contact with the temples¹⁹ and sometimes with the Chola court. Moreover, the state helped organize units called *taniyūr*, “separate villages,” from the tenth century onward, in which the temple held a central institutional position.²⁰ The king appears to have been at the head of a complex system in which a network of temples was central (Kulke 1995).

whose chiefs were brought under the ritual hegemony of the Chola state” (Byres and Mukhia 1985: 61). The conversion of a village into a *brahmadēya* and the activities of the Brahmins were sometimes met with substantial opposition by villagers, as revealed by inscriptions from the eleventh and thirteenth centuries (Byres and Mukhia 1985: 594).

¹⁸ In a first phase, grants of lands mainly involved communities of Brahmins. Then temples received lands and villages (Heitzman 1997: 105–107). The Brihadeshvara temple at Tanjavur (Rajarajeshvara) had over 600 employees, usually paid in kind (“during the Chola period, some of them were also paid in the form of revenue assignments”) (by comparison, the large Pallava temple of Mukteshvara employed only 54 people) (Singh 2008: 622). The Brihadeshvara temple had an endowment of 300 villages. Villages were also attributed to Brahmins. Whereas usury was prohibited for Brahmins until the Gupta period, from the eighth–ninth century onward, temples invested their assets (gold, silver . . .) with village assemblies or other communities, and received interest of up to 12 percent per year (Kulke 1993b). Temples also accepted silver deposits, and leased out land. Land grants to temples did not necessarily imply a transfer of property, sometimes only assignments of tax revenues (Heitzman 1997: 58, 124).

¹⁹ An assembly “composed of priests, of important members of the community, Brahmins and non-Brahmins,” often including merchants, managed the temple (Hall, 2001a: 9). Temples played a crucial role locally, and were also places where the Chola kings’ authority was recognized. Hall (2001b: 115) rightly insists on the integrative function of the temple, a place where “interlocking networks (political, religious, and commercial)” met. Temples were incorporated into networks whose main nodes were the royal temples. Some of the villages contributing to the upkeep of the main temple at Tanjavur were located far from the Chola capital: five villages were in Sri Lanka, four in Karnataka, and two in Kerala (Heitzman 1997: 140 n. 4).

²⁰ On the *taniyūr*, see Champakalakshmi 1996: 378–381. In the Pāla kingdom of Bengal, also, the kings’ troops could not enter *brahmadēya* land (Singh 2008: 578). Land that had been granted could not be sold in the future.

The nature of the Chola state has been fiercely debated. It is difficult to agree with Spencer (1977) and Stein (1980) who – unlike Sastri (1935) – depict a weakly centralized state, all but devoid of bureaucracy, and forced to launch *razzias* in order to acquire resources (Chakravarti 2001a: 88ff.). According to Spencer and Stein, only a smaller portion of the taxes collected went to the Chola rulers. For Stein, who sees the Chola kingdom as a “segmentary state,” real power was in the hands of *nādu*, which were clusters of villages already present in the Pallava Empire: the Chola kings initially held ritual power. Other authors, such as Subbarayalu, Heitzman, and Hall, argue that the *nādu* and the *vālanādu* – ensembles of *nādu* – were in fact state-controlled units for the collection of taxes; they conducted land surveys, starting under Rājārāja I’s reign. Heitzman (1997: 148ff.) considers the Chola administrative system as a “proto-bureaucracy” during the early period of the kingdom; this system rapidly evolved toward the setting up of a true bureaucracy during the eleventh century;²¹ the “Department of land revenues,” extended as far as the village level (Heitzman 1997: 156ff.). Villages retained some degree of autonomy, however.²² The Chola administration shows a division of labor among various offices, along with a hierarchy of positions. Taxes were also collected from local princes and assemblies of market centers (*nagaram*). From 1000 to 1150, the Chola administration operated far beyond the Tanjavur district. The taxation system was standardized, and legal units of measure were established. Taxes in kind “could be converted into equivalent forms of precious metals or due bills allowing for the purchase of commodities” (Heitzman 1997: 127).²³ “The tax could rise to one-third” of the harvest (Thapar 2004: 378). In addition, the population was mobilized for various tasks (Thapar 2004: 161).

The Chola drew revenues from the agrarian sector and from trade. Letters from the Cairo Geniza and the Chinese chronicles reveal the significance of long-distance trade: clearly there was not a split, but symbiosis between agriculture and the maritime domain. State revenues allowed the Chola kings to build vessels and mobilize armies. An inscription from Rājendra mentions a great *setṭhi* merchant employed by the king (Chakravarti 2002b: 108). The state issued gold, silver (bullion), and copper coins. Rice served as a standard of value and means of exchange for small transactions. Textile manufacturing was a major industry, under the aegis of weaving communities such as the Saliyar, who often settled in the temple precinct, “also called the temple town” (Ramaswamy 1985: 13, 16). Market centers (*nagaram*) developed, especially toward the end of the Chola period, in connection with the markets of great urban centers and ports such as Nāgapattinam. These *nagaram* also played a political role in the Chola kingdom.²⁴ While Hall (1994) states that there was at least one *nagaram* per

²¹ According to Palat, along the major rivers, the Chola state first employed “officials functioning as roving plenipotentiaries . . . They were later displaced by an increasingly routinized bureaucracy” (2015: 48).

²² The Chola system, writes Sen (1999: 551), displays a “harmonious combination of efficient central control and the utmost local freedom”; “local institutions could then become instruments of central patronage” (Robb 2002: 71).

²³ For an evaluation of Chola taxation, see Heitzman 1997: 161ff.

²⁴ On the role as interface played by the *nagaram*, in an intermediate position within a hierarchy of markets, see Hall 1994: 75ff. After the Chola, the *nagaram* would still be influential in the Pandya kingdom (thirteenth century) (Champakalakshmi 1996: 46). Assemblies of *nagaram*, however, seem to have disappeared from the thirteenth century on. Hall (2001b: 109) notes that “the *nagaram* was absorbed into the temple administration” at Cidambaram. The decline of local assemblies such as those of the *nagaram*

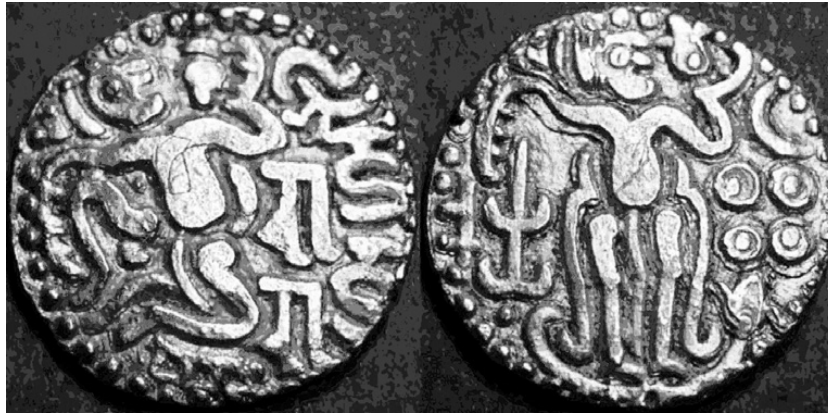


Figure 8.2 Chola gold coin of Rājārāja I, influenced by late Kushan coins; on the left, king seated holding a flower; on the right, standing king or divinity, lifting an object (lotus?); 21 mm, 4.34 g. © www.vcoins.com

administrative unit *nādu*, Singh (2008) notes that a *nādu* could include several *nagaram*. Partnership agreements linked the *nagaram* and associations of itinerant traders. In the ports, these traders enjoyed special status.

The process of price formation has been debated: were the prices fixed or partly determined by the market? Hall (1994: 60–61, 66) suggests that prices were fixed, perhaps through agreements between local institutions and merchants. We do observe, however, some fluctuation in the rate between rice and gold at various places and times.

The Chola rulers promoted long-distance trade, which provided part of their income and power. Thus, “King Kulottonga I abolished tolls and customs . . . at a time when he was consciously enhancing the status of the port of Visākhapaṭṭinam, in Andhra Pradesh” (Chakravarti 2001a: 90). The rulers maintained links with the Kudirai Chetti merchants of the Malabar coast, who provided them with horses from Arabia (Champakalakshmi 1996: 47). The east coast of India exported textiles, pearls, precious stones, ivory, and products from the western Indian Ocean. Tamil inscriptions relevant to the great Chola period have been discovered in Southeast Asia and China (see below) dated to between the ninth and thirteenth centuries.²⁵ The Chola Empire and its vassals protected guilds such as the Ayyāvoḷe, who extended their activities and also founded new towns in Karnataka, under the patronage of the Chālukya from Kalyāna and the Hoysala from Dvarasamudra²⁶ (in the Hoysala Empire, several inscriptions mention merchants who bought horses, elephants, and

in favor of notables has also been pointed out by Heitzman; these notables were collaborators and at times members of the state apparatus, a state which was becoming increasingly involved in the agrarian economy (2001: 131, 136). Semi-autonomous local institutions such as the *nagaram* may have appeared as obstacles to kings wishing to increase their power.

²⁵ Historians have listed one inscription at Pagan, two in peninsular Thailand, four in northern and western Sumatra, and one at Quanzhou (China).

²⁶ See Abraham 1988: 51, 54. The Ayyāvoḷe were present in southern Karnataka after the Chola kings took control of this region. Unlike what some authors have argued, the guilds’ significance did not decline during the eleventh century. S. Arasaratnam (1986) emphasizes the link between trade and politics since the beginning of the second millennium in the kingdoms of South India.

luxury goods for their rulers, and at times took up positions in the administration) (Chakravarti 2002b: 108–109). An inscription at Balagami (Karnataka) mentions the *Ticai Ayirattu Ainnuruvar*, “the 500 of the thousand directions” (the Ayyāvoḷe guild), who traded fabrics, spices, precious stones, and horses; this guild’s merchants conducted business in southern and eastern India, “at Lata [in Gujarat], Nepala [Nepal], Parasa [Persia] and Barwara [Barus, northwestern Sumatra]” (Ramaswamy 2002: 430). A South Indian inscription dated to 1055 magnifies the prominent position of these merchants:

Famed throughout the world, adorned with many good qualities . . . having 18 cities . . . at the four points of the compass, born to be wanderers over many countries, the earth as their sack . . . the horizon as their light, . . . visiting the Chera, Chola, Pandya, Maleya, Magadha, Kausala [Bihar], Saurashtra, Khamboja [northwestern India], Gaulla [Bengal], Lala [Gujarat], Parasa [Persia] and Nepala, [they travel] by land routes and water routes penetrating into the regions of the six continents, with superior elephants, well-bred horses, [taking with them] large sapphires, moonstones, pearls, rubies, diamonds, lapis lazuli, coral, cardamoms, cloves, sandalwood, camphor, musk, saffron and other perfumes and drugs, . . . they fill up the emperor’s treasury of gold and jewels, and his armoury of weapons . . . ; the mighty ocean as their moat, Indra as the hand-guard . . . To the Five Hundred *svami* [masters] of Ayyāvoḷe, salute with joined hands . . . and present offerings, *ō setthi*, to the Five Hundred *svami* of Ayyāvoḷe, present the betel in a tray, wishing them all good fortune. (Kulke and Rothermund 2004: 126–127)

During the eleventh and twelfth centuries, taking advantage of the Chola expansion, the “Five Hundred” were present south and north of the Upper Kāverī, and as far as Orissa, as well as in northern Sri Lanka. It was a merchant who suggested a military intervention on this island to King Rājārāja (Rothermund 1988: 9).²⁷ Sri Lankan inscriptions reveal the presence of merchants, soldiers, and weavers from Tamil Nadu. The merchant corporation of the Nānādēsi left many inscriptions dated to a period between the first quarter of the eleventh century and the fifteenth century. The Nānādēsi probably dominated the internal and external trade of Sri Lanka between the eleventh and thirteenth centuries. These inscriptions reveal close interactions with the royal court at Polonnaruwa. The Nānādēsi managed royal donations and appear to have received the privilege of collecting taxes from Queen Līlāvati, in an area located near centers of pilgrimage (Pathmanathan 2002: 53). The Nānādēsi had their own armed troops, thus anticipating by a couple of centuries what has often been considered as an “innovation” of the trading companies such as the Dutch East-India Company (VOC) (Bopearachchi 2002: 102–103). The Nānādēsi may in fact have been Ayyāvoḷe (Karashima 2002: 4), who, according to Champakalakshmi, were the only guilds using mercenaries, and who were allowed to establish protected merchant towns (*erivīrapattana*), with no need for royal decrees.²⁸ The expression *Nanadesi Ticai*

²⁷ Benjamin of Tudela’s testimony reveals that Sri Lanka remained a hub for trade toward Southeast Asia and China. According to him, “23,000 Jews live there” (perhaps we should read 3,000) (Harboun 1986: 51). “From there, it takes forty days to reach China” (Harboun 1986: 128).

²⁸ Subbarayalu and Karashima 2002: 31. According to Ramaswamy (1985: 29), “the five hundred of the thousand directions” who traveled abroad were called Nānādēsi, to distinguish them from local merchants. Abraham (1988: 96–97) mentions links between Nānādēsi and armed groups. The guilds on Sri Lanka had mercenaries who would later serve Sinhalese princes (Basham 1967: 223; Abraham 1988: 78–79). Champakalakshmi notes that the armed groups linked to the Ayyāvoḷe, who controlled protected

Ayirattu Ainnuruvar reveals this identity. The term “Nānādēsi” is sometimes used alone, however, and the existence of distinct guilds cannot be excluded (Mukund 1999: 30). The “Five Hundred” did not form a unified body; the organization included various groups (Champakalakshmi 2001: 330; Karashima and Subbarayalu 2002: 84). The coexistence of people belonging to different social classes within associations was current; for Jain, “guilds were the most potent factor in destroying the edifice of the caste system” (2001: 364). The guilds also mixed people of various religions: Christian merchants who received privileges from the Chera king Rājasimhan, a vassal of the Chola, thus belonged to the Manigrāmam guild. Moreover, inscriptions mention the Anjuvannam guild – including foreign merchants – at the port of Visākhapaṭṭinam (Andhra Pradesh) (Chakravarti 2004). In Tamil Nadu and Karnataka, guilds collected taxes levied on merchants; these taxes were destined for the supply of temples, and were involved in the administration of ports (Hall 1978: 83, 90–91; Shanmugam 2002). As would be the case later in Europe, a true symbiosis between merchant associations and the political power thus took shape in South India, at the precise time when capitalistic practices were also developing in Song China, with whom the Chola maintained relations. The Tamil merchants, however, did not have the same grip as the European traders on production processes, in the textile sector for example.²⁹ Neither was there systematic use of violence, although violence was not totally absent. Karashima mentions links between warriors employed by the guilds and the Chola army; he also acknowledges that relations between the state and the merchant guilds have yet to be clarified (2002: 9).

In Southeast Asia, relationships between the Chola court and Srīwijaya appear to have been friendly until the reign of Rājendra. Austronesians may have settled along the Coromandel coast. Mas‘ūdi (tenth century) goes so far as to report that Sarandīb (Sri Lanka) was “governed” by the Māharāja of Zabaj, Srīwijaya. Tamil inscriptions dated to 1005, 1015, and 1019, refer to the construction and embellishment by the Māharāja of Srīwijaya of a Buddhist temple at Nāgapattinam, a temple also receiving grants from King Rājarāja in 1005³⁰ (this temple probably hosted merchants from Southeast Asia, whom Rājarāja sought to attract to the Chola kingdom). In 1015, a Chola embassy bound for China stopped at Srīwijaya.³¹ We do not know exactly what motivated the change in attitude of the Chola a few years later, but the Srīwijayan grip on the Straits and on the Malay peninsula probably impeded Chola trade with

cities (*erivirapattana*), do not appear to have been present in royal centers such as Tanjavur (Tanjore) and Kānchīpuram, where the organizations of the *nagaram* had the upper hand on the trade networks. Nor were these armed groups present in ports such as Nāgapattinam, controlled by Chola officials; in fact, their activity increased significantly during the thirteenth and fourteenth centuries after the Chola disappeared (see below) (Champakalakshmi 1996: 52). Hall (1978: 85), however, indicates the presence at Nāgapattinam of a regiment of mercenaries *vēlaikkārar*, who were often associated with guilds of itinerant merchants.

²⁹ Some weavers were also merchants, however, during the Chola period (Ramaswamy 1985: 32).

³⁰ Coedès 1964a: 259–260; Kulke and Rothermund 1998: 123. Donations from Srīwijaya arrived again in 1046 and 1084. Under Rājendra’s reign (1012–1044), a king of Kaḍāram (Kedah) offered “Chinese gold” (*chinakkanakam*) to a temple at Nāgapattinam (Chakravarti 2001a: 86).

³¹ The Chola sent another embassy to China in 1020, but whether or not it stopped at Palembang is not known.

Cambodia and China. As Tracy has suggested (1991: 16), the sudden violence exerted by the Chola may have been a reaction against the new monopolistic tendencies of Palembang during a period of decline of its “empire,” at a time of fiercer competition along the trade routes: Kulke (2012: 121) notes that in 1023, the Chinese emperor “urged Arab envoys to shift their trade from the Central Asian Silk Road to the Silk Road of the Sea.” Controlling the southwestern coast of India, the entire east coast, as far as the Ganges, and also Sri Lanka and the Andaman Islands, Rājendra felt strong enough to launch an expedition against Srīwijaya in 1025, perhaps at the instigation of the great merchant guilds. Among the “conquered territories” (more or less subjugated?), an inscription from Rājendra dated to 1030–1031 lists Srīwijaya; Malaiyūr (Jambi); Ilangaṣogam (Langkasuka, on the Thai–Malay peninsula); Māppapālam (Papphāla, on the coast of Pegu); Mevilimbangam (possibly on the isthmus of Ligor); Valaippandūru (perhaps Pānduranga, in Champa); Talaittacholam (Takola, on the isthmus of Kra); Mādamālingam (Tāmbraalinga, centered on Nakhon Si Thammarat, the ancient Ligor, on the east coast of the Thai–Malay peninsula); Ilāmuriḍeṣam (Lāmuri of the Arab geographers, in northern Sumatra); and Kaḍāram (Kedah) (Coedès 1964a: 263). The impressive list of Rājendra’s “conquests” sheds light on the trade networks controlled or organized by Srīwijaya. Soon thereafter, in 1028, Srīwijaya sent an embassy to China. In 1033, in turn, Chola ambassadors arrived at the Chinese court.

Relations with Srīwijaya appear to have been peaceful once again for a few decades during the mid-eleventh century. In 1068, however, the Chola “interfered in Srīwijaya through a naval expedition on behalf of a pretender to the throne of Kadaram, Srīwijaya’s second capital” (Kulke 2012: 121).³²

Alongside their military actions, the Chola exerted an intelligent form of diplomatic and commercial activity. Rājendra sent embassies to China in 1015 and 1033, and the Song emperor recognized the Chola kingdom as one of the great tributary states of China (as Digby has noted, the foreign embassies who brought “tributes” to East Asia were usually induced less by the threat of military Chinese interventions than by the prospect of lucrative trade – this situation would change later during the fourteenth and fifteenth centuries).³³ The Cambodian king Sūryavarman I, who extended the control of the Angkor kingdom as far as the Malay peninsula, also initiated relations with the Chola: in 1012, he sent a chariot as a gift to the Chola king. One can speculate on the possibility that this gift was an attempt to forge an alliance against Srīwijaya; in any case, there was increased competition along the maritime trade routes, accentuated by the Chinese interest in the southern seas. One notes the presence of Chinese ceramics at Arikamedu dated to the eleventh and twelfth centuries. In 1077, the Chola king Kulottunga I sent an embassy of seventy-two merchants, who brought with them

³² See also Kulke and Rothermund 1998: 124. Perhaps “deliberately misled by the ambassadors of Srīwijaya” (Kulke and Rothermund 1998: 124), the Chinese, misunderstanding these events, called the Chola “vassals of Srīwijaya.”

³³ Digby 1982c: 135. Jacq-Hergoualc’h *et al.* (1996: 404) note, however, that embassies were sent in order to obtain China’s support prior to launching military operations. Mataram, for example, sent emissaries to China in 992, during a period of hostility with Palembang. In its turn, Srīwijaya dispatched an embassy in 1017–1018 (this Sumatranese kingdom would destroy Mataram the following year).

“ivory, rhinoceros horns, pearls, rose water, putchuk, barus camphor, brocade, opaque glass, and frankincense” (Singh 2008: 602). In 1088, this king confirmed the donations formerly made to the monastery at Nāgapattinam, built in 1005 by the king of Srīwijaya.³⁴ Kulottunga I also renewed contacts with Cambodia. Relations were maintained with Burma: the Burmese king Kyanzhitta wrote a letter on gold leaf to the Chola king.³⁵ The peaceful reign of Kulottunga (1070–1118) fostered the development of South Indian merchant guild activity. An inscription in Tamil reveals the presence of Ayyāvoḷe at Lobu Tua (Barus, northwestern Sumatra) in 1088, in a region exporting camphor, where glass and ceramics from western Asia have also been excavated. A Chola influence can be seen on bronzes from Sumatra (Palembang, and Padang Lawas) (Kulke and Rothermund 2004: 160).

Wars conducted by the Chola led to a degree of recession in the empire by the late eleventh century and during the twelfth century. Under King Vikramaditya VI (1076–1126), the Western Chālukya from Kalyāna took control of the Vengi region, on the Andhra coast, between the Krishna and the Godāvāri Rivers. Further south, the Chola were also defeated by the Hoysala at the battle of Talakadu (in the Kāverī River valley) in 1117. While the Chola later retook some of these territories, their decline would deepen during the thirteenth century, for both domestic and external reasons, and the Pāndya finally gained the upper hand.

Bengal

The Pāla dynasty enjoyed a new upswing under King Mahipāla (995–1043), who re-established his authority over Bengal and Bihar, and attempted to develop agriculture. By contrast, the empire once again fell into decline under his successors, up until Ramapāla (1072–1126), the last significant king of the dynasty, who extended his empire to Assam and Orissa. East of the Pāla, the Buddhist Chandra dynasty dominated Samatata and Harikela from 900 to 1050. This dynasty issued mainly silver (sometimes gold) coins; these metals came from Yunnan and Burma (Wink 1990: 270). The Sena, vassals of the Pāla, took advantage of the weakening of the Bengali rulers after Ramapāla to establish their power over the entire Bengal region – including the Dhaka region – by the mid-twelfth century. The Sena appear to have set up an administration along the lines of the Chola. “All the Sena grants specify the annual revenue income of the gifted land in terms of currency units (*purana*, *kapardaka purana*, and *churnni*): “this suggests the maintenance of careful revenue records by the state,” at least in the core of the empire (Singh 2008: 582). Despite the denominations mentioned, no monetary issues are known from this dynasty; cowries served as currency and as a standard of value.³⁶ The empire appears to have been relatively weak when the Muslims invaded in 1205.

³⁴ Two ambassadors from Kiḍāram (Kedah) (and from Srīwijaya) arrived at Kulottunga’s court (Nilakanta Sastri 1949: 84–85).

³⁵ In an inscription in the Shwesandaw pagoda, Kyanzhitta claims to have obtained the conversion of a Chola prince to Buddhism; this prince may have been Kulottunga I (Hall 1978: 94).

³⁶ *Purana* refers to a coin, and also to a measure of value. *Kapardaka purana*: “measure of value, in cowries” (Wicks 1992: 100). “A 1204 grant separates *kapardaka* from *purana*, indicating a distinction between the two terms, perhaps signaling the use of both cowries and silver as measures of value.” The term *churnni*

Further south, Orissa was partially unified by the Somavamshi dynasty (922–1119); the Eastern Ganga later ruled the region. Bengal and Orissa held relatively modest positions in international trade at this time. It is significant that Zhao Rugua's book (1255) devotes chapters to the Chola, the Malabar coast, Gujarat, and Malwa, whereas the chapter on Tianzhu ("India" = northeastern India) includes only data on earlier periods (Hirth and Rockhill 1911).

Magnificence and Fall of the Delhi Sultanate

The Emergence and Rise of the Sultanate

Northern India experienced troubled times. During the eleventh century, it was the scene of lootings carried out by the Ghaznavid Muslims, who were opposed with some success by the Chandelā king Vidyadhar (1017–1035). Maḥmūd of Ghazni destroyed the temple of Shiva at Somanath, carrying away 6.5 tons of gold. Lootings allowed Maḥmūd to build a sumptuous capital, and his court attracted many scholars, such as al-Bīrūnī and the poet Firdawsī, who completed his *Shāhnāhmeh*, begun under the Samanids. Heirs to the Samanids, the Ghaznavids fostered the flowering of a Perso-Islamic culture. The wealth of the Ghaznavid Empire was also based on caravan trade, and on the heavy taxes imposed on Khorasan. A significant state bureaucracy and sizeable army, however, involved heavy expenditures which would become unbearable when the Seljuk took over Khorasan in 1040. The empire clearly experienced a downturn at the end of the eleventh and beginning of the twelfth century; this downturn was marked by a monetary crisis (Deyell 1999: 83).

Northern India was deeply divided at the time among various Rajput powers,³⁷ whose competition did not prevent trade exchanges, as shown by the large number of monetary issues: gold and silver coins (in fact these were always alloys: gold-silver, silver-copper, and trimetallic alloys) featuring the goddess Lakshmī issued by the Kalachuri from Tripuri; the Chandelā from Khajuraho; the Gahādavala from Kanauj; and the Yādava from Bayāna; and silver and copper coins showing a bull and a rider, struck by the Tomara from Delhi and the Chāhamāna from Shākhambārī and Delhi (the *dehliwāla*) (Deyell 1999: 86ff., 144ff.), using as model the old coins of the Shāhī dynasties. The silver content of the coins was often low – revealing the high price of this metal³⁸ – though relatively stable. The significant circulation of coins of the bull-and-rider type, found in Punjab and in Afghanistan, attests to the activity of regional and interregional trade, as do the lootings by the Ghaznavids and their successors (Deyell 1999: 180).

The Ghurid dynasty (Turks or Iranized Tajiks, from Ghōr, in central Afghanistan) superseded the Ghaznavids during the twelfth century (Ghazni was taken in 1173), and in its turn invaded Pakistan and northern India. The Ghurids seized Multān in 1175,

may refer to silver dust (Wicks). Thapar writes that the Sena "introduced a cash assessment for revenue" (2004: 461), but does not state her sources.

³⁷ A. Wink observes that "ideals of chivalry and heroism" developed from the tenth century onward (1997: 172).

³⁸ Gold issues were quite limited.



Figure 8.3 Bull-and-rider coin, Shāhī dynasty, between 750 and 900, Kabul. Silver and copper © Bob Reis www.anythinganywhere.com.

The motif of the rider-king holding a spear goes back to the Indo-Scythians dynasties.



Figure 8.4 Bull-and-rider coin, Chāhamāna dynasty, late twelfth century, Delhi. Silver and copper © Bob Reis www.anythinganywhere.com. This design was in use from 750 to 1265 (Deyell 1999: 247).

Peshawar in 1180, Lahore in 1186, and won a significant victory over the Chāhamāna in 1192. As early as 1182, the rulers of Sindh recognized the suzerainty of the Ghurids. More than the will to islamize the region (the ideological dimension of the conquest has often been overstated), the lure of wealth and the capture of multitudes of slaves explain the Ghaznavid and later the Ghurid irruptions into northern India, as well as the ensuing military conquests, facilitated by the lack of fighting spirit on the part of the Indian armies – these were often led by princes with no military skills – and by the superiority of the Turkish archers on horseback (Gaborieau 1995a: 434–435; Wink 1997: 93; Kulke and Rothermund 2004: 166).

In 1192, the Ghurid ruler Mu'izz ud-Dīn Muhammad ibn Sām took Delhi and Benares, leaving his general Qutb ud-Dīn Aibak, a slave of Turkish origin,³⁹ as governor at Delhi: northern India was at last conquered at the end of the twelfth century. According to Ferishta, Mu'izz ud-Dīn “destroyed approximately one thousand idol temples and loaded four thousand camels with nothing but the most valuable goods: jewels, gold, and precious silken cloth” (Richards 1983: 193).⁴⁰ The significance of hoarding in India has often been mentioned (for example by al-'Umarī – a scholar from Damascus – in his *Masalik* during the fourteenth century). The Ghaznavid and Ghurid raids allowed wealth to be transferred into the eastern and later the western Muslim world (the Seljuk Sanjar took and looted Ghazni in 1117).⁴¹ Another general of

³⁹ Aibak was bought from the Mongols by a merchant specialized in the slave trade. Aibak then traveled to Aden and Cairo, where he was sold to another merchant “who had proceeded from the court of Delhi on a mission to Egypt and Baghdad” (Wink 1997: 198).

⁴⁰ As Lieberman notes (2009: 748), “the desecration of Hindu temples by the invaders is also an effort to destroy sources of sacred power with which enemy kings identified.”

⁴¹ Slightly later, the Mongol expansion triggered new transfers of wealth to the west.

Mu‘izz ud-Dīn, Muhammad Bhaktiyār Khaljī, entered Bihar, destroyed the Buddhist university of Nālandā (many monks then fled to Pagan and Tibet), and defeated the king of Bengal around 1202, whose treasure went to Mu‘izz ud-Dīn. After Mu‘izz ud-Dīn’s death in 1205, Qutb ud-Dīn Aibak took the title of sultan at Lahore, and proclaimed his independence from the Ghurids. In 1229, his successor, Iltutmish, was consecrated as the sultan of Delhi by a representative of the Abbasid caliph of Baghdad. The sultans “based their power on . . . an alien military elite bound together by Islam and certain tribal [Turkish or Afghan] affinities” (Kulke and Rothermund 2004: 179).

This new and violent encounter between India and Islam – a novelty partially reflected in the opposition of the Indian terms *Tajik* (“Arab”)/*Turushka* (“Turk”) – occurred at the same time as a strengthening of western influences. The sultanate took the court ceremonial and administrative techniques developed in the Seljukid Empire, where the Persian culture was preeminent.⁴² Sufi spiritualism became associated with this Persian influence⁴³ and spread through various orders; it fostered an indianization of Islam through an absorption of elements from Hinduism and local cults. Syncretic processes were reflected, especially through the development of the cult of the saints.

In order to cope with state expenses, the Muslim rulers organized the collection of land revenues in the Delhi region, and pocketed the tributes made by vassal kings. In addition, taxes on trade and a head tax were levied by officials. Officers were granted land (*iqṭāʿ*, revenue assignments), up until ‘Alā ud-Dīn’s reign; this ruler cancelled these assignments, because they favored the emergence of “feudal” lords, who were, in addition, alien to Indian society.⁴⁴ The largest *iqṭāʿ* – sometimes divided in two – was that of Bengal, with Lakhnautī as its capital (Gaur) (Wink 1997: 259). While the Delhi sultanate was an agrarian state, it also served as a “hub for international trade through land and sea” (Gaborieau 1995a: 448), notably via Gujarat and Bengal. Under Iltutmish, the Hanafi school, favorable to merchants, dominated.⁴⁵ One observes an extension of banking activities and wage labor (Mielants 2007: 123). While the state issued silver coins (*tanka*) and coins made of a silver-copper alloy (*jital*), the economy of the sultanate remained relatively non-monetized,⁴⁶ although the state did benefit from

⁴² One notes references to the Sassanid period. Under Balban’s reign, writes Wink (1990: 22), “in many ways, the Delhi court became a replica of the Sassanid court.”

⁴³ The *lingua franca* since the Samanids, Persian was the international language within the Mongol Empire. Besides this strong Persian influence, the conservation of Turco-Mongol cultural elements can be seen with the Khaljī and the Tughlūq (such as the use of Turkish dialects at the court, and the maintenance of some Turco-Mongol funerary rituals) (Subrahmanyam 1996b: 74). Persian would later become a language of communication not only in the Delhi sultanate, but also in states such as the Kākāṭīya kingdom and the empire of Vijayanāgara (Alam and Subrahmanyam 2007: 47).

⁴⁴ See below. ‘Alā ud-Dīn paid his officers fixed salaries. Contrary to ‘Alā ud-Dīn’s policy, Firūz Shāh re-established grants of fiefs (Kulke and Rothermund 1998: 180–181). Fiefholders gave part of the taxes they had collected to the Royal Treasury and contributed horses and men-at-arms.

⁴⁵ It took the place of the Shāfi‘i school, introduced by the Ghōrids. Some Sufis, however, developed a perspective hostile to merchants (Subrahmanyam 1994a: 22).

⁴⁶ Iltutmish issued a silver *tanka*, in which the percentage of silver would steadily decrease, and later, an identical gold coin, in 1260 (Richards 1983: 196–197). Lieberman notes that until 1300, “only a small part of the agrarian sector produced for distant markets and much of this sector remained outside the money market” (2009: 684). Cotton cultivation, however, must have already been significant in various areas.

the looting of Hindu royal treasuries and religious institutions, as well as from the supply of silver and gold by the Bengal. Indeed, northern India imported silver from northeastern Afghanistan; this source petered out in 1215 when the Khwarezm Shāh conquered this region, which later came under Mongol rule in 1222. The first sultans of Delhi used recast foreign or Indian coins. The bullion issued by Iltutmish had a silver content lower than the previous *dehliwāla* coins, and the exchange rate imposed for these *dehliwāla* coins amounted to a devaluation of these ancient coins (Deyell 1999: 215). The scarcity of precious metals would end only with the victorious campaigns of ‘Alā ud-Dīn Khaljī (1296–1316): according to the historian Ferishta, the royal treasury at Devagiri alone supplied 7.7 tons of gold and 12.8 tons of silver (Deyell 1983). At the beginning of the thirteenth century, maritime trade benefited from disruptions along the Central Asian routes due to the Mongol advance: Genghis Khān’s armies reached the Indus valley in 1221 and occupied Punjāb, which would undergo devastating raids between 1240 and 1285. Delhi then welcomed a large number of refugees. The Mongol incursions, however, were contained by Iltutmish and later by Balban, a former Turkish slave of Iltutmish, who reigned between 1266 and 1287. Despite conflicts, the slave trade from Central Asia continued, thanks to cooperation between Indian merchants and Mongol intermediaries (Wink 1997: 199). Muslim traders from Lahore and Multān were key players in long-distance trade, as were Hindus, who lent silver to Balban and his emirs (Wink 1997: 216).

The States to the South of the Delhi Sultanate

The Delhi sultanate initially occupied only northern India. Various states were active in peninsular India during the twelfth and thirteenth centuries, and significant transformations occurred, marked by a process of militarization that was linked to the emergence of the Delhi sultanate and the introduction of new technologies of warfare, within the context of competing states. A Yādava kingdom was established in the western Deccan, at the end of the twelfth century, at the expense of the Chālukya Empire, whose capital was Kalyāna. This empire collapsed, in part due to the emergence of the Hoysala dynasty in the southwestern Deccan. The Yādava kingdom enjoyed its maximum extension – from the Narmada River in the north to the Tungabhadra River in the south – under King Singhana II (1200–1247); it patronized scholars and poets. Further south, the Hoysala Empire flourished from the time of King Veera Ballala II (1173–1220) on; this king allied with the Chola – marking it with an exchange of princesses – against the Pāndya, who controlled South India. The Hoysala emperors who succeeded King Veera Ballala II maintained this alliance. Under the last Hoysala king, Veera Ballala III (1291–1343), the capital Dvarasamudra was looted twice (in 1311 and 1327) by armies of the Delhi sultanate; despite this, the Hoysala Empire retained its independence. Following the death of Veera Ballala III, killed in battle at Madurai, a new empire was formed, called Vijayanāgara. The Hoysala administration borrowed its organization from the Chālukya, by dividing the empire into provinces and districts; this empire, however, appears to have been more centralized than its predecessor. The state promoted the development of irrigation systems by helping build tanks and canals. Imperial resources came from land

taxes, collected by village assemblies and officials – who were sometimes granted land. Other taxes were imposed on artisans and merchants. The empire imported horses via the coastal ports, and exported pepper, wood, gold, and textiles.

In eastern India, the kings of the Ganga dynasty, who unified Orissa during the early twelfth century, strengthened the central power of their empire.⁴⁷ An inscription dated to 1230 reveals the existence of officers called *nāyaka* who exerted administrative functions and were granted revenue assignments; this organizational mode was influenced by the Delhi sultanate. The Ganga withstood the pressure of the Delhi sultanate and went so far as to attack Bengal in the middle of the thirteenth century. The frequency of the title *nāyaka* during the fourteenth century reveals the increasing militarization of the empire. Orissa was involved in long-distance trade. Chinese ceramics and some items of glazed pottery from western Asia have been excavated near Puri and at Manikpatna (Singh 2008: 587). The kingdom also traded with Muslim merchants; in the sun temple of Konarak, King Narasimhadeva (c. 1250) is featured receiving a giraffe from merchants who may have been Arabs. The Kākātīya were also active along the northern Coromandel coast. King Ganapatideva (1199–1262) encouraged long-distance trade via the port of Motupalli by reducing taxes on all goods, “including silk yarn and silk cloth” (Ramaswamy 1985: 26). He promised “safety to traders by sea starting for and arriving from all continents, islands, foreign countries and cities” (Kulke 2012: 125). Marco Polo praises the quality of the muslins thus traded.

Between the eleventh and thirteenth centuries, with the support of the kings, great temples were erected and ancient sanctuaries expanded. Major Shaivite and Vishnuite currents (especially in the Hoysala Empire) developed at this time.⁴⁸ “Owner-cultivators frequently made over their holdings to temples, on the condition that they be retained as tenants” (Subrahmanyam 1990b: 38). These temples, which were centers for pilgrimage, had an integrating function within the kingdoms; this role was strengthened by the creation of a network of sanctuaries in various regions and by the absorption of local cults (Kulke 1995: 258ff.). In addition to the great Chola temples, the major religious buildings were the Kandariya Mahādeva temple at Khajuraho, founded around 1002 by the Chandelā; the Lingarāja temple at Bhubaneswar (1070) (Orissa), built by the Somavamshi dynasty; the temples of Jagannātha at Puri (1135) and of Sūrya at Konarak (1250), erected by the Eastern Ganga dynasty in Orissa; and the Rudramal temple at Siddhpur (Gujarat) (late eleventh – early twelfth century), built by the Chālukya from Gujarat.

The economy appears to have blossomed throughout South India. Inscriptions reveal an increased commercialization of agricultural products and the importance of handicrafts, in particular textile manufacturing, which led to the development of

⁴⁷ Kulke (1995: 252–253) notes that in the ancient kingdom of Orissa, the term *mandala* referred to an autonomous principality ruled by a *sāmanta* prince. In the Ganga Empire, *mandala* indicated a province ruled by a governor appointed by the central power. This strengthening of the central power corresponded to an overall phenomenon throughout India from the tenth century onward; in Orissa, it was accentuated by the threat posed by the expanding Delhi sultanate.

⁴⁸ Among these movements was the Shaivite sect of the Lingayat, which was opposed to the caste system and the ritual hegemony of Brahmins. By the end of the thirteenth century, the Mahānubhāva sect, which emerged in Maharashtra, began showing Islamic influences.

communities of craftsmen. Kāñchīpuram, the oldest center of textile production in South India, thus housed an influential organization of weavers. Very early on, these weavers established links with merchant guilds. A sign of their wealth and of their new social status, some weavers became landowners (Champakalakshmi 2001: 336ff.).^{49,50} The Ayyāvoḷe were active during the thirteenth and fourteenth centuries, a period of political change and increasing militarization in South India. The “Five Hundred” participated in tax collection and assignments to local temples, in connection with organizations of agricultural producers and groups belonging to the elites.

The Boom in Trade from the Twelfth Century Onward

A significant boom in trade followed the formation of the Delhi sultanate; it relied on expanding agricultural and craft production. Enhancing a process of statebuilding, it also triggered growth in markets and an increasing division of labor. As was the case in China, agricultural progress, especially in irrigated rice cultivation, freed a sizeable population for non-agricultural work.⁵¹ A transregional market expanded (Abraham 1988: 64, 123–128, 156–181). The Muslim conquest introduced new techniques, especially in textile production: “the cotton carder’s bow, the spinning wheel and sewn clothing.”⁵² Treadle looms of Chinese origin came into use. These had been known in Persia during the Abbasid period. Draw looms were introduced along with Muslim weavers (Alam 2002: 454). Royal workshops were created for weaving, embroidery, and carpet manufacturing; they often used servile labor, but also skilled artisans.⁵³ Al-Umari writes:

The Sultan (Muhammad bin Tughluq Shah) maintains a *Karkhana* in Delhi for the embroidery work. There are four thousand silk workers who weave and embroider different kinds of cloth for robes (of honour) and garments. Besides, cloth from China, Iraq and Alexandria is also embroidered here. (Siddiqui 2012: 446)

“The *Masalik al-Absarfi-Mamalik al-Amsar* further refers to 4,000 other embroiderers who make garments for the Sultan and his harem” (Siddiqui 2012: 446).

⁴⁹ Temples as well as merchants were major land buyers during the late Chola period.

⁵⁰ In parallel to this new status of artisans and merchants, a social division appeared in the eleventh century between the “castes of right hand” and “castes of the left hand,” a division that did not touch the upper castes (Wink 1990: 320–321; Sinopoli 2003: 103).

⁵¹ Palat 1991: 22. While the expansion of craftsmanship had previously affected mostly urban sites centered on temples, as Palat notes, this expansion became more dispersed during the thirteenth, fourteenth, and fifteenth centuries (Palat 1991: 23).

⁵² Gaborieau 1995a: 444. Also Habib 1982b: 77; Ramaswamy 2002: 433. The carding bow had in fact probably been in use earlier in India (references in books such as the *Aganamaru* and the *Narrinai* suggest a period between the second and sixth centuries) (Ramaswamy 1985: 2; Alam 2002: 449). For the spinning wheel, the term *charkha* is of Persian origin. On the use of treadles on the loom, Habib 1982b: 79. Elvin (1973) suggests that the spinning wheel was introduced directly from China. The driving belt and the chain drive may also have come from China (Ramaswamy 2002: 431). Vertical looms were introduced for carpet weaving, from Persia (Habib 1980) or Central Asia (Riazuddin 1988; Ramaswamy 2002: 438).

⁵³ The Delhi sultanate would rely more and more upon the use of slaves (see below).

An increasing specialization on the part of textile workers is clearly apparent in Gujarat (Jain 1990: 63), Bengal (Ray 1993), and in South India (Hall and Spencer 1980: 131; Mielants 2007: 89). The influence exerted by the Muslim world (primarily Persia) led to changes in clothing that resulted in sustained growth for the textile industry destined for the internal market. Increased textile production in India also fueled long-distance trade; cotton clothing from Bengal were exported to China in significant amounts under the Song and the Yuan (Ray 1993: 130–132). Spices and slaves were also exported, all “for cash, which accumulated” in the peninsula. India also imported metals,⁵⁴ slaves (some from East Africa), and horses (which provided one of the bases for military power), in increasing numbers. Horses came from Persia, the Arabian coasts, Central Asia, Yunnan (via Himalayan routes leading to Bengal),⁵⁵ and even from the Mongol khanate of the Golden Horde. Ibn Battūta relates that while each horse there was worth one Maghrebian dinar, once in India, the same horse could be sold for the equivalent of 25 dinars, or even twice or three times this price (1982, II: 212–213). Some merchant groups specialized in the horse trade. Many gold coins issued by the various Khalji and Tughlūq sultans have been discovered at Kazan, Astrakhan, and Perm (Richards 1983: 201). Trade was also conducted by sea. ‘Alā ud-Dīn Khaljī “claimed to have 70,000 horses, and Muhammad bin Tighluq was reported to add 10,000 Arabian horses to his stables every year” (Palat 2015: 76). The sultanate attempted to reduce the inflow of horses to the states of South India, by controlling ports such as Thana (Kulke 1993b). The increase in trade went along with advances in shipbuilding. Paper manufacturing developed as well.

The connection between regional developments and urban growth is clearly visible during the Delhi sultanate. It relied primarily on internal Indian progress and on expanding trade in the Indian Ocean. For northern India, Mielants correctly points out that urban growth, contrasting with the situation in Europe, occurred without access by the towns to political power and autonomy (2007: 102–105). A Ghaznavid ruler thus admonished the inhabitants of Balkh, who had resisted a Qarakhanid invasion: “Warfare is for rulers, not for subjects; it is your duty to pay taxes to whomever has you in his power” (see Mielants 2007: 105 n. 41). The situation was different in

⁵⁴ Marco Polo (1980, II: 472) describes the importation of gold, silver, and copper at Cambay and Thana; these were exchanged for indigo, cotton fabrics, and leather. The Malabar coast received copper supplied by vessels from China. These ships “also brought gold-embroidered fabrics and silk, cendal, gold, silver, cloves, nard and other spices that the people from Melibar do not have” (Marco Polo 1980, II: 468).

⁵⁵ See the testimonies of Minhāj ud-Dīn (a chronicler who lived during the thirteenth century) and of Marco Polo: “In this province [Caragian = Yunnan] are also bred large and excellent horses which are taken to India for sale” (1980, II: 303); “Few ships come to India without [horses] on board” (1980, II: 471). It was reported that “Malik Kafur compelled the ruler of Warangal to surrender 20,000 horses – many of them brought from Yunnan via Bengal” (Palat 2015: 76). The effects of climate and of the mistreatment of these animals forced the rulers to rely ceaselessly upon imports (Marco Polo 1980, I: 95; Richards 1983: 199–200). According to an inscription from Kiradu dated to 1161, a vassal of the Chālukya king Kumarapāla claimed to have seized 1,700 horses from a nearby prince, and a text from Rajasthan (1143) mentions their trade (Chattopadhyaya 2001: 299 n. 61, 300). In 1309, the Muslim general Malik Kafur seized 20,000 horses, *kobi* (from Yunnan), and *bahri* (Persian and Arab horses) in the Kākātiya kingdom (Chakravarti 2002b: 176).

South India, thus in Chola country, where significant merchant centers having the status of *erivirapattana* were protected by armed forces, as were some enclosed cities (Champakalakshmi 1996: 70, 210, 219) (see above). The “Five Hundred” of the Tamil country were active both in the eastern and western Indian Ocean. An inscription at Piranmalai (1300) reports the importation of aloeswood, sandalwood, silk, camphor oil, and elephants – all of which came through the Bay of Bengal – and also of rose water and horses, from the Persian Gulf (groups from Kerala such as the Kudirai Chettis were specialized in horse trading).⁵⁶ In addition to the ruling family, temples and monasteries were heavy consumers of products such as aromatics and perfumes. The thirteenth and fourteenth centuries saw the emergence of ports at Kāyal, Korkai, and Tiruppūlaivanam (Pulicat), and the cities of Kovalam, Sadras, and Tranquebar developed. Following the Chola decline, local chiefs and merchants extended their prerogatives. The use of the title *chakravartī* in some inscriptions appears to reflect the appearance of merchant princes (Champakalakshmi 2001: 342–343).

On the Malabar coast, within a general context of political fragmentation, Kulam remained a major port, placed under Chola and later Pāndya influence, during the thirteenth century. Chinese junks stopped at Kulam during the Song period (and later under the Yuan and the Ming). Marco Polo writes: “The merchants from Manzi, and from Arabia, and from the Levant come thither with their ships and their merchandise and make great profits both by what they import and by what they export.”⁵⁷ “The people are idolaters, yet among them are Christians, Saracens and Jews.”⁵⁸ Welcomed by the Hindu rulers, Jewish merchants and, even more importantly, Muslim merchants (Persians, Arabs, and Indians) played crucial roles in commercial exchanges.⁵⁹ Merchants of various faiths joined in an embassy to the court of Kūblai in 1282. In contact with the Persian Gulf, Kulam went into decline following the capture of Baghdad by the Mongols and the settling at Calicut of a ruler from the interior, who managed to attract Muslim merchants trading between the Red Sea and India.

Muslims grew ever more active in trade networks from western India between the eleventh and the thirteenth centuries, especially in Gujarat. Persian and Arab merchants settled in the cities of Gujarat, as shown by inscriptions in Arabic dated to the thirteenth century, found at Cambay, Sōmanāt, Junagadh, and Anahilavāḍa. A bilingual inscription (in Sanskrit and Arabic) at Sōmanāt mentions a shipowner (*nākhudā*)⁶⁰ from Hormuz, Nuruddin Firuz, who settled at Sōmanāt, and bought land

⁵⁶ This inscription provides information on the taxes levied on 27 types of goods: 1/4 *achchu* for a horse, 1/2 for an elephant, 2.5 for a small bag of pepper, 30 for a jar of rose water, and so forth. See also the inscription at Shikarpur (Champakalakshmi 2001: 339).

⁵⁷ Knowledge of the compass may have reached India at this time. According to I. Habib (1980), Indian ships carried compasses during the thirteenth century.

⁵⁸ Marco Polo 1980, 11: 462–463. Since the sixth century, Kulam housed a rich and powerful Christian community.

⁵⁹ Benjamin of Tudela (twelfth century) points out that the authorities of the city of Quilon (Kulam) ensured protection for merchants (Pearson 2003: 98).

⁶⁰ From two Persian words, *nāw*, “ship,” and *khūdā*, “master.” The term may refer either to the captain or the shipowner. Yemeni chronicles show that *nākhudā* may also have been a “title” (Vallet 2010b: 594) (on the *nākhudā*, Vallet 2010b: 589ff.).

in order to build a mosque, with the help of local Hindu notables, in 1264.⁶¹ Along the Malabar coast, the Pardeshī communities,⁶² who were in close contact with Arabia, and the Māppiḷa, who were involved in local petty trade as well as trade along the Coromandel coast, developed relatively autonomously from the northern Indo-Persian Islamic communities, marked by a strong Sufi influence.⁶³ Political fragmentation and fights among Indian kingdoms during the thirteenth century facilitated the growth of Muslim trade networks, especially those of horse merchants from the Persian Gulf and from Yemen (Vallet 2010b: 589). As of 1200, Hadramis migrated toward the ports of India, where generally speaking, southern Arabs were active in forming Muslim communities. While the equality of all believers extolled in Islam may have encouraged the conversion of members from low castes, as Correia states during the sixteenth century, this was not a generalized phenomenon (see Gaborieau 1995a: 434–435; Pearson 2003: 78–79).⁶⁴ A hierarchy similar to the caste system also developed among Muslims.⁶⁵ Conversions to Islam were significant only in the Punjāb and Kashmir regions (Wink 1997: 123), although Wink does state that sailors and fishermen may have converted to Islam on the Malabar coast, thus entering the class of the Māppiḷa. Muslims were also present along the Coromandel coast, and, more importantly, in northeastern India, where the sultanate of Bengal acted mostly as a power independent of the Delhi sultanate. While there are no known Pāla (after Devapāla) or Sena coins, issues in eastern Bengal (Samatata) and Bengal during the Islamic period benefited from silver inflows from Burma and Yunnan.⁶⁶ These coin issues were important both economically and politically: “The inscription of a ruler’s name on his coins was

⁶¹ Chakravarti 2002a: 57, following Sircar 1983. This anecdote, and the letters from the Cairo Geniza, attest not only to a climate of cooperation between merchants, but also to the religious tolerance in this social environment. The decision, made locally, was approved at the regional level and by the Chālukya king.

⁶² The Pardeshī were foreign Muslims, while the Māppiḷa were Muslims born in India, who had either converted to Islam or who had Muslims of Indian ancestry in the maternal line. The Māppiḷa adopted the matrilineality of the Nāyar caste of Malabar (Barbosa 1967, 11: 74–78; Wink 2004: 206).

⁶³ Gaborieau 1995a: 438. See above. On the Malabar coast, Islam adhered to the *shāfiʿi* school of Islamic law, as it did in the Maldives.

⁶⁴ According to Gaborieau (1995a: 434–435), the idea that Islam lured the disadvantaged castes is largely based on an ideological construction dating to the end of the nineteenth century.

⁶⁵ Conversely, anti-caste and anti-Brahmanical movements developed in Hinduism, such as the Virashaiva sect, which originated in Karnataka during the twelfth century (Singh 2008: 621), although the caste system was strengthening in general; at the same time, the social status of women was in the process of weakening (Stein 2002: 144).

⁶⁶ Deyell 1983, 1994. See above on the use of silver powder in the Sena country. Yunnan was also rich in gold. “They use gold as a currency by weighing it. Gold is indeed so abundant that they give one saggio of gold for only six of the same weight in silver. And for small change they use porcelain shells [cowries] . . . All these provinces that I have described, Bengala, Caugigu [Tonkin] and Amu [Vietnam], have gold currency and porcelain shells” (Marco Polo 1980, 11: 306, 321). Cowries in Yunnan came from Bengal and Burma (perhaps also from North Vietnam, which Zhao Rugua describes as a place where cowries are collected; see also Vogel 1993: 243, quoting a fourteenth-century Chinese source). In eastern Bengal, during the twelfth century and the early thirteenth century, cowries remained both a measure of value and a means of exchange (as they had been since the Gupta era), but silver came to dominate (Wicks 1992: 99–101). Marco Polo has indicated the various gold:silver ratios which encouraged merchants to carry silver from Yunnan to Upper Burma. It is interesting to note a large outflow of bullion from Bengal at the beginning of the fifteenth century when the Ming seized the mines at Bawdwin (Upper Burma); this outflow also reveals a negative trade balance (Deyell 1983: 224).

regarded as one of the essential symbols of his sovereignty” (Wicks 1992: 101). These issues also marked a process of monetization of the economy in Bengal, where taxes were no longer paid in kind but in silver.⁶⁷ In fact, from the eleventh century onward, servile labor decreased throughout India; it was replaced by monetary payments that reflected a “growing monetization” (Gaborieau 1995a: 436), which stepped up production. The expanding use of coinage allowed the rulers to increase the efficiency of the tax system, and to acquire horses and luxury goods. The importation of silver from abroad stimulated long-distance trade. In South India, the Yādava from Devagiri and the Hoysala from Dvarasamudra made use of gold coins (the gold originating in India or Southeast Asia). The Yādava also used tiny silver coins. Chola and later Pāndya issued gold, silver, and copper coins. Credit and banking activities developed in parallel; India had been dealing in letters of credit since the tenth century (Jain 1990: 201–207; Mielants 2007: 88), and made increasing use of them from the twelfth century onward. The Rajput kingdoms along the margins of the Delhi sultanate grew impoverished, however, and began issuing coins with a lower silver content: this happened with the Vaghela dynasty of Dholka, which superseded the Solanki (Chālukya) in Gujarat in 1243. Their coins were no longer accepted for use as international currency.

Besides the Muslims, Jains and Hindus held a significant place not only in trade, but also in the political sphere. From the ninth century on (and most likely well before), “the legal injunctions against the sale and purchase of certain articles by higher *varnas* came to be disregarded”; “the cult of wealth cut across the concept of caste . . . , and mercantile development provided a new basis for class differentiation and stratification”; “the merchants managed to make their way into the fold of the ruling aristocracy” (Jain 2001: 346–352, 357–358). The ascent of the Jain merchant Vastupāla in the political sphere and his extraordinary wealth (first half of the thirteenth century) in Gujarat are well known. Vastupāla and his brother Tejapāla had sufficient financial means to sponsor the building of temples. One finds biographical texts on great merchants from the twelfth and thirteenth centuries onward (Chakravarti 2002b: 28). Engaged in maritime trade or as “chiefs of caravans,” the great merchants (*sāhu*), who were also bankers, operated abroad through agents. Thus the merchant prince Jagadu (Gujarat) – a Jain – traded with Persia with the help of an Indian agent based at



Figure 8.5 Gold coin featuring a lotus flower, issued by the Yādava king Ramachandra (1270–1311), 16 mm, 3.5 g.

© Bob Reis www.anythinganywhere.com

⁶⁷ Wicks 1992: 103. A process of monetization can also be seen on the Coromandel coast during the thirteenth century, for example in the region of Tondaimandalam (Hall 2001a: 14).

Hormuz.⁶⁸ In long-distance trade, one sees "the concentration of businesses and ownership of means of transportation in the hands of a few rich traders, . . . particularly in South India, where the purchase of horses required sizeable initial capital" (Vallet 2010b: 597). The life story of Sayyid bin Abū 'Alī, a man of Omani origin, who was born on the Coromandel coast, exemplifies the internationalization of the networks and the at-times conflictual character of relations between the political and commercial spheres. His father, who had become very rich, had played a political role at the Chola court. Sayyid lost the king's trust and had his property confiscated; he then fled to China in 1291, where he had been invited by Kūblai (Liu Yingsheng 2000).

The presence of Jewish merchants on the western coasts of India has been mentioned above. The links of the Jewish networks of Yemen and Egypt with India, however, appear to have faded away during the twelfth–thirteenth century when the Ayyūbid rule and later that of the Bahriyya mamlūks were established in Egypt, in 1174 and in 1250, respectively.

Whereas commercial activity grew in the western Indian Ocean during the twelfth and thirteenth centuries, its progress was even greater in the eastern Indian Ocean and the China Sea. Marco Polo states that there were ten times more vessels plying between India and China than between India and the countries located further west (1980, 11: 468). It is significant that the discoveries of Chinese ceramics dating from the thirteenth century onward increase noticeably on the eastern coast of India (Karashima *et al.* 2002).

On the Coromandel coast, the Chola dominated trade in the Bengal Sea until the twelfth century. During the early part of this century, Chinese sources show that a significant part of China's export trade was in the hands of the Kling merchants of Coromandel and Sri Lanka.⁶⁹ However, social tensions sharpened in South India during the thirteenth century, due to the power great landowners had acquired; tensions were also aggravated by an inflow of refugees from the north, fleeing looting by Islamic troops.⁷⁰ Grants to religious institutions diverted resources at a time when the needs of the state were growing, so that the rulers were forced to raise taxes, leading to popular outrage (Heitzman 1997: 171; Kulke and Rothermund 2004: 140). The state was weakening as early as the end of the twelfth century. Supralocal assemblies (*periyānādu*) developed at this time (Karashima and Subbarayalu 2004), perhaps in reaction to Chola central power (Heitzman 1995). Governors of regions or local notables linked to the dominant landowners then acquired political power, which hastened the state's disintegration.⁷¹ At the beginning of the thirteenth century,

⁶⁸ Jain (2001: 356) also mentions a Hindu merchant at Anahilavāḍa whose caravan trade prospered thanks to his agents at Ghazni. Jagadū was a Jain, but "he is lauded for constructing a *masjid* [mosque] for the Ismaili community" (Chakravarti 2002b: 242 n. 35).

⁶⁹ See Zhao Rugua, in Digby 1982c: 127. While Digby correctly points to the importance of Indian navigation in the history of the Indian Ocean, and that of Chinese junks from the twelfth century onward, he curiously neglects to write about Indonesian vessels. Hundreds of Chinese coins dating from the Song period have been recovered on Sri Lanka. The Yaphuwa treasure, for example, contains 381 coins, 266 of them from the Northern Song, and 114 from the Southern Song (+ one Vietnamese imitation) (Bopearachchi 2002: 116).

⁷⁰ Tensions increased between 1250 and the beginning of the fifteenth century; they led to a peasant revolt in 1429 (Spencer 2001: 33, following N. Karashima) (see below).

⁷¹ In the north and south of the empire, members of assemblies of *nādu* (*nattar*) collected taxes (Heitzman 1997: 171). Heitzman's study thus reveals a "moving frontier" between centralized administration of the

disorder and famine affected the Chola kingdom, whose power declined against that of the Pāndya, who were preeminent at the time of Marco Polo's visit to South India.⁷² The Pāndya king Māravarman Kulashekhara (1268–1310) conquered the Chola territory and a part of Sri Lanka and conducted an active commercial policy, marked by the control of Kulam. His main minister was Taqī al-Dīn al-Tībī, brother of the powerful merchant Jamāl al-Dīn al-Tībī from Qays. According to Marco Polo, the main king of Maabar “wants to buy more than 2,000 horses every year, and so do his four brothers who are kings likewise. The reason they want so many horses every year is that by the end of the year there shall not be one hundred of these horses remaining, for they all die off. And this arises from mismanagement, for these people do not know in the least how to treat a horse; and besides they have no farriers . . . Thus a great part of the wealth of the country is wasted in purchasing horses,” coming from Qays, Hormuz, Sur, and Aden⁷³ (1980, 11: 430). The region kept contact with China via its ports of Kāyal and Periyapattinam (Cail and Fattan respectively in Marco Polo), “mainly for trade in horses and pearls” (Ptak 1993b). Chinese ceramics have been excavated there (Karashima *et al.* 2002), and texts reveal that many embassies were exchanged between 1279 and 1291. Moreover, Marco Polo emphasizes the protection and care conferred on foreign merchants (1980, 11: 459); however, when Taqī al-Dīn al-Tībī died, his brother Jamāl al-Dīn “was forced to pay 200,000 dinars in order to deter the Pāndya king from seizing the goods of the deceased, and to have one of Taqī al-Dīn's sons appointed to replace his father” (Vallet 2010b: 567). After the Chola, the Pāndya pursued an attempt at administrative centralization. Overall, wetland rice cropping allowed for a significant increase in the rural population which in turn spurred the development of various handicrafts. The spread of manufacturing activities went along with a growing division of labor, reflected in the rise of craft and merchant guilds (Palat and Wallerstein 1999: 29). The presence of Indian guilds “is attested in Burma, at Pagan,⁷⁴ on the Thai–Malay peninsula, at Nakhon Si Thammarat, and in China, at Quanzhou especially, for the thirteenth century” (Jacq-Hergoualc'h *et al.* 1998: 279).⁷⁵ The Chola and other Indian navigators appear to have made use of nautical charts, which Marco Polo had the opportunity to see.

Sri Lanka's southern regions remained independent and actively exported precious stones and spices, cinnamon in particular. The Sinhalese king Bhuvanaikabahu I (1273–1284) sent an embassy to Egypt – led by a Muslim of Persian origin – in order to ensure direct sales of cinnamon, while bypassing the Rasūlid lock:

state, administration by local chiefs, and administration by the *nattar* or *periyannattar*. During the peak of Chola power, the *nattar* and local princes had only very limited roles (1997: 171–173).

⁷² See Marco Polo, 1980, 11: 424ff. regarding the province of Maabar (Coromandel). In Rasūlid sources, the term “Sūliyān” (connected to the Chola) refers to the Coromandel coast (Vallet 2010b: 564).

⁷³ Taqī al-Dīn al-Tībī “appears at the top of lists of gratification from customs at Aden as early as 693/1294” (Vallet 2010b: 567).

⁷⁴ This refers to a donation to a Hindu temple at Pagan linked to Nānādēsi, a guild of merchants (Hall 2011: 356). The donor came from the Chera capital Mahōdayapuram (Karashima 2002: 15).

⁷⁵ See also Wisseman Christie 1999: 223. The Ayyāvole contributed to the development of links between the Chola and China.

I have quantities of gems, of rubies and pearls. I have ships, clothes and other goods. I have brazilwood, cinnamon and what the Kārim imports, everything; I have spears and I have elephants. If the sultan wants the visit of twenty ships each year, I can send them to him, and the sultan can send merchants to our country. (Vallet 2010b: 598, quoting Baybars al-Manṣūrī)

The Climax of the Delhi Sultanate

The late thirteenth and early fourteenth centuries proved to be a period of expansion for the Delhi sultanate, ruled by ‘Alā ud-Dīn Khaljī (1296–1316), of the Turco-Afghan Khaljī clan, who dreamed of becoming a “new Alexander.” He managed to repel Mongol attacks on Delhi (1297, 1299) and conquered Gujarat in 1298; then he launched a major campaign toward central and southern India. The sultan captured the Rajput fort of Chitor, in Rājasthān, and in 1310 he subjected most of the Deccan to his power. He took Devagiri – the capital of the Yādava – in 1307; his general Malik Kāfur seized Warangal (the capital of the Kākātīya, in Andhra Pradesh) in 1309, and Dvarasamudra (the capital of the Hoysala) in 1310. He is said to have made use of the counterweight trebuchet, a technique originating in Byzantium, probably transmitted via the Mongols, who also introduced gunpowder and new siege technologies (Palat 2015: 81–83).⁷⁶ The military predominance of the Delhi army also relied on the use of compound bows, crossbows, and heavy cavalry (Lieberman 2009: 722–723). The Yadava and Kākātīya kings were reinstated on their throne, however, as tributary princes. Further south, the Pāndya capital, Madurai, was burned in 1310. Several areas remained independent: Orissa (until 1361), the Reddy kingdom in Andhra (founded in 1326), the extreme south – which was briefly under the control of the king of Venad (with Kulam as its capital) – and pockets of land along the coast of Malabar. The ascent of the Delhi sultanate fostered new development of the Indo-Persian culture (Alam and Subrahmanyam 2007: 46).

Under ‘Alā ud-Dīn Khaljī and his successor, “conquests and the repression of rebellions were the opportunity for massive enslavement,” for local slavery and slave trade to foreign countries (Gaborieau 1995a: 443).⁷⁷ In addition, the spoils gathered during these conquests made it possible “to free up sizeable quantities of precious metals,” and increase the supply of money,⁷⁸ within the context of expanding trade

⁷⁶ In 1399, “the armies of the sultan Maḥmūd, which Timur defeated at Delhi, carried throwers of grenades, fireworks, and launchers of rockets” (Needham *et al.* 1987: 69).

⁷⁷ ‘Alā ud-Dīn owned 50,000 slaves, and under Firūz there were 180,000 slaves in Delhi and the various *iqṭā’* (Wink 2004: 164), including 12,000 craftsmen. Throughout the history of the sultanate, expeditions were launched for the capture of slaves and horses (Habib 1982b: 90). In all of South Asia, slavery was widespread in the field of production (Mielants 2007: 115). Wink notes that the power of Turkish mamluks decreased during the fourteenth century in the government sphere, in favor of Indian Muslims and their allies (1990: 23).

⁷⁸ The treasure seized at Devagiri has been mentioned above; quantities of gold taken from the Pāndya king may have been even greater, although the figure of 241 tons given by Baranī is an obvious exaggeration. The silver put back into circulation by Alā ud-Dīn Khaljī’s spoils was the fruit of external trade, hoarded over the centuries. In contrast, part of the gold came from the gold ores of India (Mysore and Kolar). The formation of the Bahmanid sultanate would cut Delhi off from South India’s gold resources.

which benefited – domestically – from land use and from the nobility’s increasing demands for luxury goods. As already pointed out, climatic conditions at the time were favorable to agriculture, with stronger monsoons in the Indian Ocean. The sultan ordered a new survey of all land, repealed the *iqṭāʿ* system and reorganized taxation. ‘Alā ud-Dīn Khaljī set up a centralized, efficient administration at the core of his empire, where he ensured the regular collection of taxes, as well as strict control over prices and trade in grain, horses, and slaves.⁷⁹ Collected by state agents, taxes were now paid partly in cash, allowing the sultan to remunerate mercenaries and import horses.⁸⁰ The measures taken by the state were aimed primarily at maintaining a large standing army at minimal cost (Habib 1994: 105ff.). Granaries were built, and private storage of grain was forbidden. The policy thus conducted weakened the old Hindu land aristocracy, which had previously kept for itself most of the taxes levied.⁸¹ The state fixed the price of other products, such as sugar, oils, and cotton fabrics. Beyond the core of the empire, the Hindu rajas paid tribute, in cash. This increasing monetization reflected the state’s economic power. It encouraged a boom in craft production, and production for export (Palat 1991: 22). This “golden age” (at least for the elites) of the Delhi sultanate corresponds precisely to the peak of the world-system. The city of Delhi became the metropolis of the Muslim world, and other cities enjoyed flourishing economies, especially Lakhnautī (Gaur), Sonargaon, Karā, Anahilavāda, Cambay, and Devagiri. The sultan lent money to the Multānī merchants who brought in horses, slaves, and textiles. The appointment of the “prince of merchants” Ḥamīd ud-Dīn Multānī to a high theological office – regarded as scandalous by Baranī – reveals some interdependence between economic and religious powers.⁸² Gold and silver entered India via long-distance trade, from the Mediterranean and Egypt. India, however, cannot be considered as merely an area that “passively absorbed precious metals” (Richards 1983: 13): in northern and central India, between the thirteenth and fifteenth centuries, agriculture was partially export oriented; there was significant industrial production and a well-developed transportation system (see below). Trade benefited from increasing monetization. Trade expansion went along with the use of bills of credit (*hundi*); these credit notes (which had appeared slightly earlier [see above]) were similar to the Islamic *suftaja*. They functioned as checks, and could be used as payment to a third party. Braudel (2002, 11: 124) acknowledges that since the fourteenth century, India, with its “chains of moneylenders” “had possessed a monetary economy of some

⁷⁹ Kulke and Rothermund 1998: 173. Quoting the Delhi historian Baranī (c. 1285–1357), Habib (1994: 97) notes that price control by ‘Alā ud-Dīn went along with low wages – including soldiers’ wages – whereas under his successor, prices rose and wages were multiplied by four.

⁸⁰ Gaborieau 1995a: 444, 448–449; Palat and Wallerstein 1999: 23. In the earlier Hindu states, taxes were usually paid along with a share of the crop.

⁸¹ In addition, ‘Alā ud-Dīn “imposed sumptuary restrictions [on Hindu chiefs] on clothing, horses and houses” (Stein 2002: 135). Habib (1994: 103) points out the impoverishment of large segments of the upper rural population for the benefit of new urban elites. Taxes reached 50 percent of the harvest; and farmers still had to pay taxes on their houses and cattle. According to Baranī, some officials and merchants took advantage of the system instituted by ‘Alā ud-Dīn; “except for the houses of the nobles (*mālīks*) and commanders (*umarā*), officials (*kārdārān*), and Multānīs (merchants) and *sāhs* (bankers), little money was to be found anywhere” (Habib 1994: 105).

⁸² Habib 1994: 107. In the *Fatawa-yi Jahandari* (Principles of government), Baranī “exposes and attempts to solve the contradictions between the Islamic and Iranian visions of governance.”

vitality, which was soon on the way toward a certain capitalism – but one that would not encompass the entire society.”

Via land and sea routes, the Delhi sultanate received rare goods from the Orient. A fourteenth-century document lists luxury goods sent by the sultan of Delhi ‘Alā ud-Dīn to the Ilkhānid ruler of Iran Rastud al-Dīn via merchants from Baṣra: these were textiles from Gujarat, spices, aromatics, remedies (including some Chinese tea), precious stones (diamonds, probably from the eastern Deccan; rubies; sapphires, perhaps from Sri Lanka), 13 gold vessels (one described as Bengali), 500 Chinese porcelains, 30 “Martaban” jars of pickles, coconuts, fragrant oils, wood (teak, ebony, red sandalwood), elephant ivory, “teeth from the lion-fish,” and “beaks of the *samandar*” (possibly the crested hornbill of insular Southeast Asia).⁸³ The products mentioned here came not only from India, but also from China and Southeast Asia. From China, besides porcelain and stoneware, India imported silk – sometimes rewoven with cotton – as well as spices and remedies.

The Decline and Disintegration of the Sultanate

In 1320, after the assassination of Qutb ud-Dīn Khaljī, the nobles proclaimed Ghāzī Tughlūq, the son of a Turkish slave who had served Balban, sultan. The Tughlūq dynasty would reign from 1320 to 1414. Encouraged by the conversion of the Ilkhāns to Islam since the end of the thirteenth century, new migrations from Iran brought about a growing influence by the Persian culture on India. Alam and Subrahmanyam (2007: 47) point out the role of Sufis “as vectors of a new Indo-Persian cultural ferment.” Sufism played a significant role in the conversions, especially in Bengal.

Sultan Muḥammad ibn Tughlūq (1325–1351) committed the error of attempting to extend the direct rule of the state over the Deccan and all of peninsular India. For Palat and Wallerstein, this was due to the sultans’ failure to extract surpluses efficiently in the territories they controlled, leading them to attempt territorial expansion (1999: 41).⁸⁴ This expansionism, as Baranī notes, led to an excessive levy on resources, and finally to cascading rebellions. Seeking to annex the territories of the southern kings, Muḥammad ibn Tughlūq shifted his capital from Delhi to Daulatābād (near Devagiri) with no advance preparation. He “lost his control over northern India, without being able to consolidate his hold on the south” (Kulke and Rothermund 1998: 177).⁸⁵ Moreover, weak monsoon rainfall during the 1330s destabilized the sultanate, which derived most of its income from agriculture. The “seven years’ famine” which struck northern India as of 1336, however, was due not only to drought, but also to the disastrous fiscal policy

⁸³ Digby 1982c: 140. Digby believes that “tooth of the lion-fish” refers to walrus ivory from Kamchatka (?). While the document he cites does list additions, these appear to date to the fifteenth century.

⁸⁴ More generally, speaking of “conflicting dynamics,” Lieberman has correctly emphasized the role of Inner Asians in processes of statebuilding in South Asia, but also the instability of the Inner Asian empires in India, for cultural and geographical reasons (2009: 632–633).

⁸⁵ The forced displacement of the population to Daulatābād in 1330 (nobles and religious men had left as early as 1326–27) and the ruin of Delhi have both been described by Ibn Battūta and Baranī (Ibn Battūta 1982, II: 463–464, 464 n. 127). Muḥammad ibn Tughlūq attempted, in vain, to apply the technique of direct administration that prevailed in the region of Delhi to the whole empire (Thakur 1996). His military expeditions against Persia and in Central Asia were also significant failures.

implemented by Muḥammad ibn Tughlūq. The sultan attempted to impose tax collection in cash, at a time when coins were insufficient in number; the issuance of copper coins that were meant to replace gold and silver proved largely unsuccessful: counterfeiters uttered significant quantities of false money, and prices rose. The fifteenth-century Indian chronicler Yahya bin Ahmad Sirhindi noted that “People from abroad refused these copper coins . . . His Majesty was forced to recall this currency” (Sirhindi 1977). The overextension of imperial administration – civilian and military – during an unfavorable climatic period was a recipe for disaster. Tax increases triggered rebellions and repressions. In 1334, the governor of Madurai proclaimed his independence, as “sultan of Ma’bar”;⁸⁶ Bengal also decided to secede in 1338; in 1346 the Hindu empire of Vijayanāgara was created, and in 1347 Bahman Shāh, a man of Turkish or Afghan origin, founded the Bahmani sultanate in the Deccan region.⁸⁷ The ancient regional centers thus reappeared while the Tughlūq sultanate declined, with new structures influenced by this sultanate, implying an extended administration, greater military power, and the introduction of revenue assignments. Sultan Fīrūz Shāh (1351–1388) tried to reconsolidate the position of the Delhi sultanate in northern India, albeit with mixed success, by building great irrigation canals, using the *iqṭāʿ* system, and adopting appeasement measures for the nobles and the ulamas; while he created hospitals for the poor, he also levied a *jizya* tax on the “heathens” (Hindus), who were at times persecuted. In addition, this sultan conducted military expeditions abroad (in Bengal, Orissa, and Gujarat), with mixed success.

Mongol raids had struck India during the thirteenth and early fourteenth centuries without ever reaching or destroying the core of the Delhi sultanate; at the end of the fourteenth century, however, taking advantage of disorders within the sultanate, the Turco-Mongol leader Tamerlane (Timūr Lang) (1398–1399) invaded northern India, took Delhi, and massacred its Hindu population. These raids also allowed him to capture vast numbers of slaves. Initiated during Muḥammad ibn Tughlūq’s reign, the collapse of the empire of Delhi proceeded following the ravages caused by Tamerlane.⁸⁸ In 1414, Sultan Khizr Khān, who had pledged his allegiance to Tamerlane, founded the Sayyid dynasty (1414–1451), to which succeeded the Afghan dynasty of the Lodi, which established its dominance over northern India. Gujarat, Malwa, and Jaunpur emerged as independent sultanates (in 1391, 1394, and 1401, respectively). The Timurids would retain control of Lahore, Multān, and Sind.

The decline of the Delhi sultanate had both internal and external causes. Curiously, Gaborieau states that the quick disintegration of the sultanate occurred not within a context of economic recession, but during a period of expansion. This disintegration may have resulted in part from the non-centralized nature of imperial institutions

⁸⁶ Ibn Battūta, 1982, III: 77ff., 269ff. Ibn Battūta visited the sultan of Madurai in 1344 and prompted him to launch a military expedition to the Maldives. He describes the fortified port of “Fattan” (possibly Periyapattinam, although some authors have suggested Nāgapattinam).

⁸⁷ Moreover, a sultanate of lesser importance was established in Kashmir in 1346. In 1326 a small Hindu kingdom ruled by a Reddy dynasty formed in Andhra, on the ruins of the Kākāṭīya Empire vanquished by the sultan of Delhi.

⁸⁸ India was affected by a series of famines between 1396 and 1408, which was also a time of low Nile flooding: the causes of these famines were thus both local and global (Dhavalikar 2004).

(Gaborieau 1995a: 441).⁸⁹ As pointed out above, however, an economic downturn affected the entire world-system from the 1330s onward, the Delhi sultanate included. The quantities of gold coins issued by the Delhi sultanate decreased during the fourteenth century; the same can be seen for silver coins, after the middle of the fourteenth century.⁹⁰ Whereas northern India entered into a period of “monetary famine” as of the 1330s, the situation in Bengal and South India appears to have been different (Subrahmanyam 1994a: 16, 39). Bengal issued silver coins consistently from the middle of the fourteenth until the sixteenth century.

Small independent sultanates were created, which would often be absorbed by more powerful neighbors. The sultanate of Honavur, between Mangalore and Goa, where Ibn Battūta sojourned, was one example. Its sultan paid tribute to the king of Vijayanāgara, but “at the same time he extracted tribute from the ports of Malabar.” He gathered a fleet of fifty-two ships to attack Sandapur (Goa), an attack in which Ibn Battūta participated. It seems that a raid from Vijayanāgara exterminated the Muslim community of Honavur in 1427 (Digby 1982c: 155).

Two states, the Bahmani sultanate and Vijayanāgara, quickly demonstrated a desire for expansion which led to incessant wars during the fourteenth and fifteenth centuries, during which the Bahmani sultanate often held the advantage, thanks to the significant number of horses it imported, on which it depended. While the ruler of Vijayanāgara Bukka I (1356–1377) was defeated in 1362 and was required to pay tribute, he later took his revenge by capturing the port of Goa and the region along the east coast between the Tungabhadra and Krishna Rivers. Bukka extended the empire by conquering most of South India. He also sent an embassy to China in 1374. His successor Harihara II (1377–1404) extended the grip of Vijayanāgara along the coast of Konkan and took a part of Andhra, but he appears to have been on the defensive by the end of the fourteenth century, confronting the Bahmanid sultan Firūz Shāh (1397–1422).

Despite the wars, India’s terrestrial and maritime trade remained strong during the thirteenth and fourteenth centuries. Exports at first dealt in textiles (and dyes such as indigo), as well as spices, rice, and sugar, as the sultanate encouraged sugarcane cultivation. From Delhi, slaves were also exported, first to Multān, also a transit point for imported horses.⁹¹ Rice and textiles often served as exchange currency for other goods.

Muslims played a growing part in trade during the fourteenth and fifteenth centuries, toward the west and also toward Southeast Asia and China, whereas the former guilds appear to have lost their previous importance.⁹² While it is possible that because of his links with Muslim networks, Ibn Battūta has minimized the role of Hindu

⁸⁹ Baranī points out that: “it is wealth that inspired sedition” (Gaborieau 1995a).

⁹⁰ The Bahmani sultanate issued silver coins during the 1350s, however; part of the silver may have come from Bengal, according to Deyell (1983: 224). The booty seized by Timūr Lang at Delhi in 1399 shows that the sultans kept a sizeable treasury in gold until that time. Silver was rarer; the problem was aggravated by the loss of control over Bengal.

⁹¹ Multān, however, seems to have decayed compared to the previous period, “but it revived during the reign of Firūz” (Habib 1982b: 82). This sultan forbade the export of slaves at a time when the militarily declining sultanate could scarcely obtain slave supplies (Habib 1982b: 91).

⁹² The Manigrāmam of Cranganore were given a special right to export certain products during the thirteenth and fourteenth centuries in the internal and external trade of the Tamil country, but it

merchants (Digby 1982c: 159), Ludovico di Varthema notes at the beginning of the sixteenth century: “The [Hindu] pagans do not navigate much; but it is the Moors who carry the merchandise” (1863: 151).⁹³ This expansion was the continuation of a process that had begun with the emergence of Islam, along peaceful processes not directly linked to the Muslim conquests – which had often been violent. This said, the setting up of maritime Muslim networks was probably encouraged at the outset by the capture of Daybul, an anchorage point and a hinge for transregional trade; it was also favored by the development of Muslim communities along India’s west coast, and later by the formation of the Delhi sultanate⁹⁴ and the control of Bengal by this sultanate (and later by independent sultanates). Even on the Coromandel coast, many traders were Muslims: they formed the community of the Marakkayar (or Maraikkayar; cf. Tamil *marakkalam*, “ship”), for example in the port of Kāyal (Subrahmanyam 1990b: 96).⁹⁵ Baranī suggests that much of the long-distance trade of the Delhi sultanate was in the hands of Multānī (people “from Multan”); some were Muslims, but often they appear to have been Hindus (Habib 1982: 85). In fact, Hindus were traders on land routes, and active in the financial sector, whereas Muslims were preeminent on sea routes. However, Barbosa, who wrote between 1511 and 1516, notes the significance of the Chettis (Hindus) from the Coromandel coast at Malacca; he describes them as the owners of ships called “junks” (Barbosa 1967, 11: 159–160, 172). At Hormuz, in the middle of the fifteenth century, Hindus were mentioned among foreign residents (Digby 1982c: 159).

Located at the end of routes from the Ganges valley and the Delhi region on the Indian Ocean, Gujarat held a special place in international trade during the thirteenth and fourteenth centuries. Textile production (cotton fabrics and silks) flourished; while this was nothing new, production grew significantly from the thirteenth century onward. Gujarat also exported carpets, tooled leather, agate, carnelian jewels, ivory items, and glass beads. Ibn Battūta mentions rice export (Sind, Gujarat) toward South Arabia and the Maldives. The networks of the Gujarati merchants allowed them to trade “metals from the West, ivory, gold and slaves from Africa, gold and long pepper from Sumatra, rubies and lacquers from Pegu, spices from the Moluccas, and precious stones from Ceylon” (Bouchon 1999: 46). At Cambay, according to Ibn Battūta, “the majority of the inhabitants are foreign [Muslim] merchants” (this is probably an exaggeration: it seems that a large part of the population of Gujarat was still Hindu during the fifteenth century). The “king of the merchants” was a Kāzarūnī, a member of a Persian Sufi order whose expansion into India occurred in parallel to the growing

disappeared with the emergence of Vijayanāgara. While the name “Ayyāvoḷe” remained, it seems to have meant something different than it had during the oldest periods (Abraham 1988: 2).

⁹³ Portuguese chroniclers, however, would note the presence of Banyans from Gujarat in the ports of East Africa (see below).

⁹⁴ The invasions by the Delhi sultanate, however, were not necessarily beneficial to local Muslim networks. The chief of a trading base of the al-Tibī family on the Coromandel coast (this family built networks between Iran and China) “committed suicide at the beginning of the fourteenth century, ruined by the invasion of armies from Delhi” (Aubin 1988: 84).

⁹⁵ During the fifteenth century, the Marakkayar – called Marakkar – were settled on the Kerala coast, at Cochin especially, where they integrated into the social category of the Māppiḷa; Marakkar would later be chosen as chiefs of the fleet of Calicut at the beginning of the sixteenth century.

influence of Hormuz during the fourteenth century. Another important merchant came from Baghdad, and a third from the region of the Caspian Sea. The internationalization of the trade networks and the convergence between trade and political power are illustrated by the life history of Taj ed-Dīn Ibn al-Kūlamī. This merchant arrived at the sultan's court "from the lands of the Turks" with magnificent gifts. He may have been a *kārimī* (he had built a *madrasa* in Alexandria), and was linked to the city of Kulam through his father. He was appointed governor of Cambay by the sultan. "From there, he sent ships to Malabar, Ceylon and elsewhere, and he 'became enormously wealthy'."⁹⁶ While it is partly true, as Palat notes, that political power did not depend on merchants, indeed it was dependent upon horse imports and precious metals. However, the capitalist ideology of merchant classes was unable to invest in the territorial states (Palat 1991: 24; 2015: 29).⁹⁷

The main ports of the Bahmani sultanate along the western coast of India were Chaul⁹⁸ and Dabhol. Vijayanāgara relied on Mangalore and the ports of India's east coast. The sultanate of Madurai was incorporated into Vijayanāgara in 1370.

On the Malabar coast, a major part of trade was in the hands of the islamized Pardeshī and Māppiḷa communities, "who traded with Arabia, Hormuz and the Maldives" (Lombard 1990, 11: 33).⁹⁹ These communities worked "under the authority of indigenous rajahs, over whom they had political influence in line with their economic weight" (Aubin 1988: 84). Merchants from South India were also active in the Bay of Bengal and beyond during the fourteenth and fifteenth centuries. Ibn Battūta points out the importance of Calicut, where he sojourned for three months in 1341. He saw "thirteen Chinese vessels" in the port. "It is visited by men from China, Java, Ceylon, the Maldives, al-Yemen and Fars. Its harbor is one of the largest in the world" (2002: 223). The "sultan" was an idolater, but the "chief of the merchants" was a man from Bahrain. A famous shipowner named Mithkāl lived there, "the owner of many vessels, which he used for trading with India, China, Yemen and Fars."¹⁰⁰ According to al-Khazrajī, the Muslims of Calicut named the sultan of Delhi and the

⁹⁶ Ibn Battūta 1982, 111: 102–103; Digby 1982c: 156. Moreover, the sultan of Delhi had his own vessels. Ibn Battūta found several of these in the port of Calicut, along with an Arab emir who had as task to recruit "as many Arabs as possible" in the territories of Hormuz and al-Qatif (Ibn Battūta 1982, 111: 216).

⁹⁷ Authority was often granted to men of trust who had no direct links with the merchant class (Aubin 1988: 89).

⁹⁸ Chaul, located on the Konkan coast, was an ancient port, since it is already mentioned as "Semylla" in the *Periplus*, and as "Sibor" by Cosmas (sixth century); Arab and Persian chronicles call it "Saimur." "Al Masudi noted the presence of a large number of Omani, Sirafi and Baghdadi merchants at the port of Saimur or Chaul" (Chakravarti 2012: 84).

⁹⁹ In contrast, Tamil merchants, the Chettis, who were Hindus, dominated the financial sector and trade in precious stones (Bouchon 1999: 48). The Jains were also involved "in all exchange transactions and banking" (Bouchon 1988: 54).

¹⁰⁰ Ibn Battūta 1982, 111: 206–207. He also signals the presence of a Persian sheikh "to whom one presents the offerings that the inhabitants of India and China destined for the sheikh Abū Ishāk Alcāzerūny" (see above). At the beginning of the sixteenth century, di Varthema, during his journey in India, stopped at Calicut; in this port he found merchants from Iran, Hormuz, "Arabia Felix," Turkey, Syria, Maghreb, Tenasserim, "a great quantity from Sumatra . . . and some from Ethiopia and Narsinga [Vijayanagara]" (1863: 151).

sultan of Hormuz in their Friday sermons, and then requested the patronage of the sultan of Yemen in 1393 (Vallet 2010b: 584).

From Calicut, Ibn Battūta traveled to Kulam, which remained a major coastal port. The “sultan,” notes the Moroccan traveler, is an “infidel” but “he respects the Muslims.” The traders were called “sulys,” *chulya*, a term – deriving from the name of the Chola – referring to Muslims from the Coromandel coast who lived on the Malabar coast and on Sri Lanka; they were not necessarily Shiite, unlike what has sometimes been written (Ibn Battūta 1982, III: 213–214).¹⁰¹ The chief of the Muslim merchants was a Shiite from Iraq. The qadi was a man who came from Qazwin, in northern Iran. “Caoulem is the city of the Malabar coast which is the closest to China and most Chinese [traders] go there” (*ibid.*). Chinese ceramics dated to the thirteenth and fourteenth centuries have been excavated at Tangasseri, near Kulam. Ibn Battūta mentions a third port visited by the Chinese ships: Hily (called Eli by Marco Polo, today’s Madayi).¹⁰² In Sri Lanka, the ruler of the Tamil kingdom in the northern part of the island also played an active role and owned many ships; he was in contact with the Coromandel coast, and traded with Yemen. Ibn Battūta writes: “While I was [in a port of] the Coromandel coast, one day I saw a good hundred of his vessels, both small and large, that had just arrived there” (1982, III: 256). At this time, the “sultan” of the Coromandel coast (Madurai) had eight ships in the same harbor, ready to sail to Yemen.

While Chinese vessels visiting India belonged to private merchants, it is probably true – for the late thirteenth and early fourteenth centuries – that “a non-negligible part of the fleets plying the Indian Ocean belonged to the rulers, especially the princes of South India” (Vallet 2010b: 598). Ibn Battūta affirms this, not only for Sri Lanka and Madurai, but also for the Malabar coast. Thus, the Hindu “sultan” of Jurfattan (Cannanore) owned “many vessels which sail to Oman, Fars and Yemen.” The ruler of Fākanūr (Baccanore) “has thirty war ships, whose chief commander is a Muslim” (Ibn Battūta 1982, III: 199, 203). The use of a fleet of 52 ships by the sultan of Honavar for his attack on the port of Goa in 1342, has already been mentioned.

As it had done during prior centuries, India continued to attract and retain precious metals between the thirteenth and fifteenth centuries. Echoing Pliny’s grievances during the first century CE, the Persian Wāṣṣāf (fourteenth century) writes that “India exports herbs and trifles in exchange for gold.” The Arab encyclopedist al-ʿUmarī (fourteenth century) also described the way in which the Indians hoarded the gold entering their country (Digby 1982c: 126). A hoard found at Broach, dated to c. 1382 (Haider 2007: 188), illustrates these inflows of precious metals: it contains primarily gold and silver coins from the Egyptian Mamluk state (struck in Cairo and Damascus), coins from the Yemeni Rasūlid state, a few coins from Europe; but very few coins from the Persian Gulf, because this region exported horses, which were paid for with precious metals, as attested by Ibn Battūta. According to a Persian document

¹⁰¹ Some *chulya* “have considerable wealth: one of them buys a vessel with its tackles and loads it with goods from his own house” (Ibn Battūta 1982, III: 213–214).

¹⁰² Ibn Battūta 1982, III: 201. An inscription at the mosque at Madayi indicates 1124 as the date of construction. Marco Polo also mentions that Chinese ships visited Eli, despite the absence of a port (Marco Polo 1980, II: 466).

dated to the fifteenth century, under the Ilkhān Oljaitu, gold from the royal treasury at Tabriz was primarily of Indian origin (Digby 1982b: 100). Of the 1,200 silver coins in the Broach hoard, none came from Delhi, a sign of the lack of silver in the sultanate, which still controlled the region of Broach (the only Indian coins in the hoard were gold coins struck by the sultan of Delhi while campaigning in Gujarat [Digby 1982c: 126]).

As was the case in the Delhi sultanate, militarization in the Bahmani sultanate and the empire of Vijayanāgara triggered a degree of reexportation of precious metals for the purchase of horses during the fourteenth and fifteenth centuries. Expanding military forces were not the only cause of this outflow. Like Marco Polo, Wāṣṣāf notes the nefarious effects of climate and poor care: the high death rate of horses implied a constant demand for new importations, despite the appearance of books on “horse science” from the twelfth century onward. All the major ports of the Persian Gulf and South Arabia were involved in this traffic. The Persian city of Qays specialized in the horse trade and Al-‘Umarī points out the significance of Bahrain, where an emir exported horses to the Delhi sultanate. Al-‘Umarī mentions the horse trade from Iraq and Yemen. The chroniclers of the Delhi sultanate write of Syrian horses. Trade also followed land routes, as shown by the discovery of Indian coins in southern Russia (see above). Data available on horse prices during the mid-fourteenth century reveal that India was obliged to give away sizeable amounts of gold and silver. A satisfactory horse may have been worth 50 to 100 slaves (Digby 1971: 37–38); see Table 8.1.

The massive importation of horses worked in favor of the merchants and Muslim networks controlling their commerce. This led to a growing involvement by Muslims in struggles for political power (Digby 1982c: 152). Moreover, by importing horses from Central Asia and from Tibet, India put itself into competition with the Yuan and later the Ming dynasty of China, which also bought horses, and paid for them in part with tea (Richards 1983: 201).

Donations by pilgrims traveling to Mecca and other sanctuaries of the Muslim world were another cause of drainage of precious metals to the West.¹⁰³ The famed sanctuary of the Sufi saint Abū Ishāq al-Kāzarūnī, protector of sea voyagers, in southern Iran, also attracted significant subsidies.¹⁰⁴

Table 8.1 *Horse prices in the mid-fourteenth century (Digby 1971: 37–38)*

Arab or Persian racehorses (destined for the nobility)	1,000 to 4,000 silver <i>tankas</i>
Good horses from Central Asia	500 silver <i>tankas</i>
Horses from Punjāb or ordinary horses from Central Asia	100 <i>tankas</i>
Mule	4 or 5 <i>tankas</i>
Slave	20 to 40 <i>tankas</i>

¹⁰³ The sultan of Bengal Azam Shāh sent a richly endowed emissary, who was responsible for implementing the realization of various projects at Mecca and Medina, in 1409 (Richards 1983: 203).

¹⁰⁴ See above for Ibn Battūta’s testimony (Richards 1983: 203).

While the trade balance of India was positive with the West, it was negative with Southeast Asia: western silver was reexported for the eastern trade. Trade between India and Southeast Asia remained significant, within the context of Islamic expansion in Indonesia. Chinese products transited through insular Southeast Asia and the Thai–Malay peninsula, which exported spices, perfumes, and wood. From eastern regions, India also imported various metals (copper, tin, lead, zinc, and gold), and elephants. Ibn Battūta describes a pulpit made of sandalwood from Makassar (*almokāssiry*) at the Delhi court, where aloeswood from Malaysia or Cambodia and benzoin from Sumatra were used as perfumes.¹⁰⁵

Indians from the Coromandel coast were active in long-distance trade with Southeast Asia and China. A Chinese pagoda was built in Nagapattinam in 1267, and 1,838 Chinese coins have been found in the neighborhood of this city (Kulke 2012: 125). The presence of Chinese ceramics at Periyapattinam and Kilakkarai (thirteenth and fourteenth centuries) shows that Chinese ships traded along the Tamil coast. A large South Indian community existed in China at that time, as shown by the discovery of a Hindu temple at Quanzhou, and that of a Tamil–Chinese inscription from another temple in the same city, mentioning the dedication of a Shiva statue (Kulke 2012: 125). The Chola still had diplomatic relations with China during the 1370s (Pelliot 1933: 328).

Bengal was a region of special importance. The Bengalis used both “junks” and ships of the dhow type. By the mid-fourteenth century, among the products traded by the Chinese with Bengal, Wang Dayuan mentions silk, taffeta, satin, cloves, nutmeg, and blue-and-white porcelain (Rockhill 1915). While silver *tankas* were used in transactions of some significance, cowries were used as daily currency. Trade with the Maldives was based on an exchange of rice/cowries (Wang Dayuan notes that a load of cowries could be sold for its equivalent in rice in Orissa or Bengal). The Maldives also sold cowries to the Yemenis, who “carried them in their ships as ballast, instead of sand” (Ibn Battūta 1982, III: 228).¹⁰⁶ Ibn Battūta indicates that in West Africa, cowries were worth at least 350 times their price in the Maldives (Hogendorn and Johnson 1986: 25). In Gujarat, conversions were known between cowries and metallic currency during the twelfth century. At the beginning of the sixteenth century, the Portuguese Duarte Barbosa would write: “Small seashells [cowries] are much traded with Cambay and Bengal; these countries use them as currency which is more appreciated than copper” (Allibert 2000: 62). C. Allibert correctly signals the role played by the Arabs in the diffusion and use of cowries, of which they were able to use a number of different values. “The Arabs rapidly understood that it was less costly to use cowries to purchase servile labor force on the African continent than it was to pay for such a force in gold dinars” (Allibert 2000: 67).¹⁰⁷

¹⁰⁵ *Kamāry* (from “Khmer”) and *kākouly* (from Qaqula, on the Thai–Malay peninsula) are probably two varieties of aloeswood (Ibn Battūta 1982, II: 415, III: 304). On *almokāssiry*, see Ibn Battūta 1982, II: 424, and III: 71.

¹⁰⁶ This author also writes: “The Maldivians sell [cowries] for rice to people from Bengal.” The archipelago of Mergui (Burma) was another place where cowries were collected for export to Thailand.

¹⁰⁷ In 1614 also, one could buy a slave in Guinea for mere handfuls of cowries (according to Samuel Braun, a Swiss-born German physician in the service of the Dutch, who traveled to what is now Liberia; Allibert 2000: 67).

In addition to maritime routes, land routes within India were important – and complemented the sea routes. From Vijayanāgara, routes thus led to Goa, Calicut, Masulipatnam, Pulicat, and in the north, to Hyderabad and Cambay (Chaudhuri 1985: 172; Frank 1998: 89). Long-traveled roads linked India with China via Tibet, Assam, and Burma. For R. Palat and I. Wallerstein (1999: 29, 34), thriving manufacturing industries – already noted – and a growing division of labor led to the phenomenon of regional interdependence, albeit less pronounced here than in Song China.

While exchanges declined in the western Indian Ocean from the 1330s onward, a significant trade was maintained between India and Southeast Asia during the second half of the fourteenth century – a period of decline in the world-system. The same observation has been made for the fifth–sixth and ninth–tenth centuries. The eastern coast of India, Bengal, and Gujarat benefited from this trade, as did new Southeast Asian powers such as the Javanese kingdoms of Mataram, Singhasari, and later Mojopahit, and the sultanate of Pasai on Sumatra.¹⁰⁸ As early as the eighth century, Muslim merchant communities, which had settled at the main nodes of the networks, formed the basis for an Islamic expansion which occurred throughout the archipelago from the thirteenth century onward.

¹⁰⁸ Wisseman Christie (1998b: 344) argues, however, that maritime trade slowed down in Southeast Asia at the end of the thirteenth century and once again expanded by the early fifteenth century.

Southeast Asia: From the Decline of Srīwijaya to the Rise of Mojopahit

The Island [Java the Less] hath great abundance of treasure, with costly spices, lign-aloes and spikenard, and brazil, and ebony, and many others that never come into our parts, due to the path length and its perilous difficulties, but some of these goods are carried to the provinces of Mangi and Catai [China].
(Marco Polo 1980: 412)

The kingdom of Shepo is in a south-easterly direction from Quanzhou, (whence) ships start, as a rule, during the winter, for, sailing day and night with the north wind, they can arrive (in Shepo) within about a month . . . Sailing northwest (from Shepo), in fifteen days one arrives at the country of Poni [Brunei]; furthermore, you come in ten days to the kingdom of Sanfoqi [Srīwijaya] . . . [In Shepo], they have elephants' tusks, rhinoceros horns, pearls, camphor, tortoiseshell, sandalwood, cloves, cardamoms, cubebs, lakawood . . . They have various colors [of] brocaded silks, cotton and damasked cotton gauzes. . . There is a vast store of pepper in this foreign country and the merchant ships, in view of the profit they derive from that trade, are in the habit of smuggling (out of China) copper cash for bartering purposes. Our Court has repeatedly forbidden all trade (with this country), but the foreign traders, for the purpose of deceiving (the government) have changed its name and refer to it as Sugidan.
(Zhao Rugua 1225, in Hirth and Rockhill 1911: 75–78)

Continental Southeast Asia: A Limited Role in Long-Distance Trade (Eleventh–Thirteenth Century)

The period between the eighth and tenth centuries in insular Southeast Asia had seen the preeminence of Srīwijaya and of his allies or vassals on the Thai–Malay peninsula. During the eleventh century, Srīwijaya's grip on the Thai–Malay peninsula was contested by other powers. Under Śūryavarman I's reign (1002–1050), the Khmers controlled the ancient Mōn territory of Dvāravatī, as well as the Thai–Malay peninsula as far as the isthmus of Kra.¹ It seems that Śūryavarman sought to establish a route to the Chola kingdom via the peninsula: goods were carried from the Isthmus of Kra to

¹ A Khmer inscription on a Buddha found at Chaiya (possibly dated to the second half of the twelfth century) hints that this region may have been within the Khmer orbit of administration (Wicks 1992: 227) (see below).

Lopburi. In the Bay of Bengal, in lower Burma, a Mōn kingdom based at Thaton² served as a center for overseas trade as well as a place where Buddhism flourished, in its connection with Sri Lanka and eastern India.

In Upper Burma, which had been weakened by the attacks of the Nanzhao kingdom (Yunnan), the Pyu gave way to newcomers, the Burmese: these may have founded Pagan during the first half of the ninth century. The Burmese developed irrigated agriculture, and Pagan came to dominate the other city-states.³ Unrest affecting Nanzhao during the tenth century blocked routes toward China. This new situation may have forced inner Burma, until then a center for exchange between northern India and China, to focus on more southerly maritime routes (Hall 2011: 218). According to Burmese traditions, Thaton was conquered by the Burmese state of Pagan in 1057, which then became part of the maritime circuits in the Bay of Bengal.⁴ The king of Pagan, Anawrahta (1044–1077), controlled the centers of Bassein and Tala (a port near Pegu), and did not hesitate to send his armies further south, on the Thai–Malay peninsula, as far as Mergui and the Isthmus of Kra. These conquests, including parts of Tennasserim and Arakan, appear to have been answers to the Khmer expansion during the early eleventh century. Anawrahta's conquests also reflect the internal growth of the Burmese kingdom, accompanied by the construction of many religious buildings during the eleventh century (and even more during the twelfth and thirteenth centuries). The kingdom's economic growth was founded upon its Buddhist temples and monasteries, to which the elite granted land and wealth, because merit was viewed as a source of status. As was the case in India, and in the Cambodian state,⁵ the Burmese temples, initially,⁶ helped integrate the country: donations allowed the king to establish his power and ensured redistribution of wealth. The benefits derived from the king's meritorious actions reflected upon the entire community. Temples were centers of development for agriculture, crafts, and trade (Lieberman 2003: 96; Hall 2011: 207). The kingdom, a good example of synthesis among various cultural elements, was symbolized in the Myazedi pillar erected toward the end of King Kyanzhitta's reign (1084–1112) and inscribed in four languages: Burmese, Mōn, Pali, and Pyu. The friendly relations Pagan maintained with Sri Lanka ensured the progress of Theravāda Buddhism. The Sinhalese king Vijayabāhu I (1055–1110) asked Pagan for help in his fight against the Chola, who were seeking to control the island. The Burmese king answered by sending products from the Thai–Malay peninsula. The Chola were

² Inscriptions in Old Mōn at Thaton appeared only during the eleventh century. The existence of a Mōn confederation centered on Thaton from the seventh to the tenth century has been questioned by M. Aung-Thwin (2005), but the theses of this author are highly controversial.

³ Lieberman 2003: 91, 100. The Burmese arrived from Nanzhao and – beyond – from Gansu. Agriculture in Upper Burma benefited from better climatic conditions, with an increase in average temperature and rainfall. This context slowly induced the spread of *indica* rice varieties producing higher yields than the *japonica* varieties previously grown (Lieberman 2003: 101). The city of Pagan was probably occupied by the Pyu prior to the arrival of the Burmese.

⁴ According to Aung-Thwin (2005), this is a legend forged at a later time. The control of Pagan over Lower Burma during the eleventh century, however, is a thesis accepted by most historians (Lieberman 2003: 91).

⁵ Which, in contrast, built upon Shaivism mixed with Vishnuism and Māhāyana Buddhism.

⁶ The size of these donations, however, ultimately weakened the state, whence the necessity of periodic ritual “purifications” of the Buddhist community; these provided opportunities for the state to seize the wealth of the clerics (Hall 2011: 347–348).

expelled from Sri Lanka, in 1070. Then Vijayabhu I sent “treasures” to the king of Pagan, and in 1075, Buddhist priests from Burma were invited to Sri Lanka in order “to purify the order” (Hall 1992: 247, according to the *Cūlavamsa*).

Following the trade routes, Theravāda Buddhism would later spread into continental Southeast Asia. “By its nature, textual Buddhism tended to favor royal authority: it devalued local sources of sacred power in favor of universal perspectives [and] preached respect for court-defined social hierarchy,” in which kings were “guardians of morality” (Lieberman 2003: 138). The Burmese grip on the northern Malay peninsula may have been motivated by a Chola raid against “Kaḍāram” in 1067, a port that Hall locates at Takuapa (1992: 248).⁷ In contrast, for Coedès and Wolters, who agree with Nilakanta Sastri (1955: 271), Kaḍāram ought to be identified with Kedah, further south on the Malay peninsula, and the raid – in 1068 (not 1067) – was the result of a request made by Śrīwijaya.

Competition among the various states of the region for control over the Thai–Malay peninsula was clearly a sign of increasing trade. During the 1160s, the Burmese appear to have blocked the routes between the Thai–Malay peninsula and Angkor and sought to monopolize the elephant trade,⁸ driving up prices and threatening commercial exchanges between Angkor and Sri Lanka. Although the Sinhalese retaliated with a raid,⁹ relations warmed once again under the Burmese king Narapatisithu (1173–1211), who sent monks to Sri Lanka for ordination. According to Hall, Narapatisithu re-established Pagan’s control over Tāmbralinga, “with the Sri Lankan king’s permission.”¹⁰ Moreover, various texts signal economic relations between Pagan and South India during the twelfth century, at the time of the Chola king Kulottunga. Zhou Qufei’s Chinese text dated to 1178 indicates: “Some say that one can go there [to the Chola country] by way of the kingdom of P’u-Kan [Pagan]” (Hirth and Rockhill 1911: 94). Moreover, a thirteenth-century inscription at Pagan refers to a donation made by a man from the Malabar coast to a temple linked to an association of South

⁷ A ruler of Kaḍāram was forced to flee his country, and he sought assistance from the Chola. According to Hall (1992), this 1067 raid may explain Takuapa’s decline, as well as the rise to power of Kedah. Hall’s thesis, considering a relocation of the place called Kalāh by the Arabs from Takuapa to Kedah following the Chola raid, is ingenious but improbable. In fact, Kaḍāram was probably Kedah, and the raid may have had other motives, as Coedès (1968) suggests. According to Hall, also, the new situation sheds light on the reasons why “Tāmbralinga” (?) sent a mission bringing tribute to the Chinese court in 1070; it was the first mission since 1016 (the Chinese term for the tributary country here is “Danliumei,” which may have been located in the region of Chaiya – or further north – and not at Nakhon Si Thammarat (see below). If Danliumei-Chaiya was (once again?) significant at this time, this means – unlike Hall’s contention – that Takuapa, at the western end of a route crossing the peninsula, was still active. Other authors, however, see a relative decline of Chaiya during the eleventh century, to the benefit of Nakhon Si Thammarat; and the identification of Danliumei remains controversial (see below).

⁸ Here, Wicks (1992: 129) shows that two forms of trade existed between Lower Burma and Sri Lanka: “commercial traffic with merchants as intermediaries, and a gift trade in which goods were exchanged between rulers.”

⁹ The regions in Lower Burma affected by the raid may have been more or less autonomous at this time (Hall 1992: 250, based on the *Cūlavamsa*, which also mentions the interception by the Burmese of a Sinhalese princess sailing to Cambodia).

¹⁰ Hall 1992: 249. According to D. Wyatt (1975), based on the chronicles of Nakhon Si Thammarat, Sri Lanka may have exerted control over Tāmbralinga between 1130 and 1176. These interpretations appear questionable.

Indian merchants; this temple appears to have existed for some time (Hall 1992, 2011; see above). Lists of offerings to the king mention products from the south and west (India, Iran), revealing the extent of Pagan's trade.¹¹ The standardization of weights and measures during the late twelfth century "prepared the way for the monetization of the Burmese economy during the thirteenth century" (Wicks 1992: 122). Silver was both a measure of value and a means of exchange.¹² Increasing monetization made the supply of precious metals more essential. Moreover, the lack of labor force may explain why, from the twelfth century onward, inscriptions mention increased raids from Pagan and Arakan into the southeastern Bengal delta in order to capture people, "primarily skilled artisanal workers" (Mukherjee 2011: 12).

Further east, the Khmer Empire experienced a period of prosperity during the twelfth and thirteenth centuries, in parallel to that of the Burmese kingdom. Sūryavarman II (1113–1145/1150) created Angkor Wat, with its tanks and canal network. While the Khmer kingship was based on a Shaivite royal cult, in which Vishnuite and Mahāyana Buddhist components merged, Vishnuite beliefs appear to have held sway under Sūryavarman II.¹³ The reign of Jayavarman VII (1181–1219?) was the high point of the empire, marked by the construction of Angkor Thom, where recent research has revealed sophisticated levels of planning.¹⁴ Such accomplishments demonstrate the ruler's ability to mobilize a large labor force. As was the case in Burma, temples were hearths of agricultural and economic development.¹⁵ The temple network played an integrative role for the empire and for the Khmer kingship.¹⁶ While the Khmer state issued no currency,¹⁷ Zhou Daguan refers to the use of Chinese coins and rice for small transactions, and hemp cloth (which was locally produced, or imported from Thailand, Champa or India) for "somewhat larger" transactions; gold and silver were reserved for large transactions (Wicks 1992: 206). Zhao Rugua and Zhou Daguan, who visited

¹¹ Wicks 1992: 126. For Lieberman (2003: 94), the volume of this trade and its significance for the Burmese kingdom were only relative.

¹² The Bawdwin silver mines (Burma) have been worked since the tenth century (Wicks 1992: 133). Pagan had no minted currency. Copper and paddy were used for minor transactions.

¹³ The Javanese rulers of Kediri and Singhasari showed the same tendencies during the same period (Coedès 1968: 297). Vishnu's role as guarantor and restorer of the world order encouraged kings to adopt Vishnuism: they were thus featured as reincarnations of the divinity.

¹⁴ J. Gaucher, Rapport EFEO, 2005. The Bayon is located in the middle of the enclosure. The buildings' decorations reveal a syncretism between Mahāyāna Buddhism and Shaivite and Vishnuite cults. Some buildings and votive tablets also reflect the expansion of Theravāda Buddhism.

¹⁵ Irrigation was probably less widespread than previously thought; agriculture was primarily recession agriculture; it partially used floating rice. The purpose of the large tanks is still being debated (Stark 2004: 107).

¹⁶ Lieberman 2003: 227ff. Temples received land grants, as well as donations of cattle and peasants, who were bound to the land. Unlike the situation in the state of Pagan, religious institutions were not necessarily freed of taxes. The temple organized production, while at the same time serving as an administrative center, collecting tributes and donations. There were also independent landowners. On the religious level, Lieberman correctly points out the opposition between a literate aristocratic culture and an illiterate popular culture, as well as differences between regions (the Mōn elite of the Chao Phraya region followed the precepts of Theravāda Buddhism). The absence of large temples in the Dvāravati area may reflect the political weakness of this region, which was disadvantaged by increased rainfall (2003: 234).

¹⁷ Lieberman 2003: 222. The integration of the Khmer kingdom, however, seems to have increased until the thirteenth century; at this time, wide roads connected the main urban centers.

Angkor in 1297 with a Chinese embassy, have emphasized a sizeable Chinese presence in the empire. Junks are featured on bas-reliefs at Angkor Thom. Various authors have stated that long-distance trade played only a secondary role in the Khmer kingdom, although the elite did import luxury goods. Yet the Khmer expansion under the reigns of Sūryavarman II and Jayavarman VII toward the coasts of the China Sea and toward the Gulf of Thailand – marked by the construction of paved roads – was clearly linked to a rising international maritime trade promoted by the Song (Vickery 2004: 5–8). Sūryavarman II, who possessed his own fleet, sent several missions to China (1116, 1120, 1128), and the Khmer Empire attempted to dominate the trade routes of Southeast Asia: it took control of the ancient kingdom of Dvāravatī, as well as the coast further to the east¹⁸ and – at times – the northern Thai–Malay peninsula. An inscription on a Buddha from Chaiya (twelfth century) uses a Khmer term (*tamlin*) to express a gold value.¹⁹ Archaeological work along the coast from Chaiya to Songkhla has revealed Khmer influences on statuettes and ceramic ware dated to the twelfth century (Jacq-Hergoualc’h *et al.* 1996: 411). Between 1145 and 1149 and later between 1190 and 1220, most of Champa was under Cambodian domination (Lieberman 2003: 351). Attacks were conducted against Vietnam, in particular in 1216 and 1218 (Vickery 2004: 9). According to Hall (2011: 364–366), these expeditions’ prime goal was to capture booty; such a goal reflects the failure on the part of the Khmer state to draw sufficient revenues from the agricultural sector, due to its lack of bureaucracy and excessive donations to religious institutions.

On the Indochinese coasts, keen competition reigned between Champa and Dai Viêt for control over long-distance trade. This competition led Dai Viêt – a state founded by the Ly dynasty (1010–1224) in northern Vietnam – to launch two successful naval expeditions against Champa in 1044 and 1069. Vijaya (Qui Nhon region) was looted twice.²⁰ The region north of Indrapura (located near Da Nang) came under the control of Dai Viêt. It is likely that a Champa polity was centered upon Tra Kieu once again from the eleventh century onward (this may have been the city of Simhapura, in the Amaravati kingdom; this name appears in the epigraphy of Champa during the mid-twelfth century) (Southworth and Prior 2010: 192). While the Ly dynasty issued copper coins, the kingdom used Chinese currency as well.²¹ The coins issued by the Vietnamese rulers had a primarily political dimension: they aimed not only at asserting

¹⁸ At Angkor Wat, bas-reliefs feature “troops from Lvo (Lavo) followed by troops of Syām Kuk” (a region which would be called “Xian” in Chinese chronicles) (Vickery 2004: 7). The region of Chanthaburi (southeastern coast of Thailand), referred to by the term “Zhen-li-fu” in the Chinese chronicles, was probably under Angkor’s control; it sent embassies to China (Vickery 2004).

¹⁹ Wicks 1992: 227. Mentioned in the inscription, the name of the king who had had the statue melted, however, recalls the title system in use in Malayu (Coedès 1968: 179), attested in 1286 and 1347, whereas the characters resemble those of Java (Jacq-Hergoualc’h *et al.* 1996: 419).

²⁰ Champa was composed of various competing political entities, with its main centers in the regions of Tra Kieu – which has yielded a large number of Chinese coins for the eleventh century – Vijaya, Kauthāra, and Pānduranga.

²¹ Vietnam gained its independence by the mid-tenth century, and issued copper coins similar to those from China, while at the same time using authentic Chinese copper coins. According to Zhao Rugua, Champa had no minted currency. Rice, fragrant woods, and gold were used as means of payment. Yet, in China, a mission from Champa was rewarded with strings of copper cash: Chinese coins were probably used in Champa (Wicks 1992: 216–217).

the independence of the country from China, but also at underscoring the king's legitimacy in the eyes of the population. Wicks (1992: 55) thus points to a distribution of coins by Ly Thai-Tong in 1028, during the first year of his reign. This society became increasingly monetized during the eleventh and twelfth centuries. While a strong Chinese influence was being felt, Dai Viêt resembled the Burmese and Cambodian states more closely than it did its powerful northern neighbor. The state directly controlled only a small area. Intermarriages and oaths of allegiance helped unite the country. As had been the case at Pagan and Angkor, the Ly elite relied upon a network of temples. "Whereas in Song China, Buddhism retreated politically and culturally in the face of a dynamic Confucianism, in Ly Vietnam, Mahayana Buddhism retained among the aristocracy the unrivaled influence it had enjoyed during the imperial era" (Lieberman 2003: 358). The Dai Viêt, Burmese, and Khmer states developed primarily on an agrarian basis,²² and their involvement in international trade remained relatively limited, despite their attempts to control the northern Thai–Malay peninsula. In fact, the bulk of long-distance trade was beyond the control of the continental states: it followed direct maritime routes linking India, the Thai–Malay peninsula, insular Southeast Asia, and China. The Khmer grip on the northern part of the Thai–Malay peninsula must be qualified: although located within the Cambodian orbit, the state which the Chinese chronicle *Sunghuiyaokao* calls "Danliumei" (possibly in the Chaiya region) sent an embassy to China in 971; another mission was sent in 1001, bringing a large quantity of sandalwood (here the *Songsbi* gives the name as "Danmeiliu"). Danliumei dispatched tributary missions to China again in 1016 and in 1070. Yet, in 1226, Zhao Rugua's book describes Dengliumei as linked to Cambodia, while indicating Jiaoluxi (Grahi, in the Chaiya region) and Danmaling (possibly Tāmbralinga) as tributaries of Sanfoqi (Śrīwijaya).²³

The Slow Decline of Śrīwijaya and the Rising Power of Java

The Thai–Malay peninsula and insular Southeast Asia asserted themselves not only as interfaces, but also as producers and exporters. Agriculture was progressing, perhaps due to Chinese exports in plows, at least in some regions, under the Song (Lieberman 2003: 95). Merchants from all regions – especially India and Sri Lanka – met in the main ports. An inscription written in Tamil recovered at Lobu Tua (Barus,

²² Lieberman 2003: 92–95, 223. Lieberman points out the role of climate change (along with an increase in rainfall) from around 950 onward. The rise of Angkor, like that of Pagan, was facilitated by climatic improvement, to which we should add "novel forms of agricultural organization and religious patronage, reconfigured by maritime influences" (Lieberman 2003: 224).

²³ O. Wolters has dismissed the idea that Danmaling was Tāmbralinga. For him, Tāmbralinga may correspond to the Teng-liu-mei (Dengliumei) of Zhao Rugua (1958: 590). Quoting Wolters, M. Jacq-Hergoualc'h *et al.* (1996) also relate Tāmbralinga to the Chinese name Danliumei found in the *Sunghuiyaogao* and the *Songsbi* from 970 to 1070, and to the "Dengliumei" of Zhao Rugua. They locate Tāmbralinga at Nakhon Si Thammarat (see below). Hall (1992: 246) accepts the identification of Tan-liu-mei with Tāmbralinga, which he locates in the region of Chaiya-Suratthani. P. Wheatley (1961: 65–66) differs, with good arguments, as Jacq-Hergoualc'h *et al.* themselves note (1996: 405): he considers that Danmaling refers to Tāmbralinga (Nakhon Si Thammarat), "Teng-liu-mei [in the *Lingwaidada* and the *Zhufanzhi*] or Tan-mei-liu [in the *Songsbi*] was located further north on the Malay peninsula."

northwestern Sumatra) refers to a merchant guild (1088), as does another Tamil inscription discovered at Takuapa (Takola) (Malaysia).²⁴ Hindu statues (dated to the tenth century) found at Nakhon Si Thammarat, capital of the state of Tāmbralinga (Tāmbralinga was also the name of its main port),²⁵ may also reveal contacts with South India. Buddhist statues dated to the tenth century have also been unearthed in the Nakhon Si Thammarat region. According to the chronicle of Nakhon Si Thammarat, “the great stupa housing the relic of a Buddha’s teeth may have been built during the middle of the tenth century” (Jacq-Hergoualc’h *et al.* 1996: 420, 430). Vestiges of buildings from the twelfth and thirteenth centuries in Tāmbralinga also point to influences from either Sri Lanka or South India.²⁶ An inscription from Polonnaruwa (in Sri Lanka) tells us that Tāmbralinga became a significant center for Theravāda Buddhism during the twelfth century. Pāla influences were also felt at Nakhon Si Thammarat and in continental Thailand at the end of the twelfth century, where they may be linked to the flight of Buddhist monks from Bengal following the Muslim advance. Inscriptions dating to Airlangga’s reign in Java also mention various communities,²⁷ as well as “three religious sects, Śaiva (Shaivites), Sogata (Buddhists), and Rishi (ascetics) or, on the other hand, of Sogata, Maheśvara, and Mahābrāhmaṇa, [which] prove the coexistence, or the symbiosis of Buddhism and Sivaite Hinduism in Java, just as in Cambodia in the same era” (Coedès 1968: 146). Some developments stand out in the lists of inscriptions concerning foreigners involved in tax collection; these inscriptions reflect changes in the political domain and in the structure of trade: the name “Colika,” referring to Cholas, thus appears during the eleventh century, and the name “Cina” (Chinese) figures in 1305 in an inscription at Balawi.^{28,29} Various inscriptions (dated to the tenth and eleventh centuries) mention the term *banigrāma* (Sanskrit *vanigrāma*) referring to merchant guilds (including both Javanese and foreign traders of both sexes) involved in long-distance trade and local tax collection (Wisseman Christie 1998b: 362ff.). Merchants engaged in the import/export trade were present not only along the coasts but also in enclaves inland (Wisseman Christie 1998b: 365–366). It is obviously not by chance that the name *banigrāma* appeared at that time, while the guilds of South India were predominant.

²⁴ The inscription at Barus mentions a grant in cash to the “captain of the city” (Lombard 1990, 11: 23; Chakravarti 2004; see above). The Lobu Tua site has yielded ceramics and glass from the western Muslim world (perhaps of various origins; see Dussubieux 2010), revealing the probable presence of Muslim merchants at this site; Lobu Tua also contains Chinese ceramics, in much greater quantity. On this site, see Guillot 1998.

²⁵ See above for debates on the relations established between various geographic Chinese names and Tāmbralinga.

²⁶ Jacq-Hergoualc’h *et al.* 1996: 430, 431–432. The authors also mention an inscription in Tamil script found at Nakhon Si Thammarat, dated to the thirteenth century. The second part of the inscription is in Old Khmer.

²⁷ See, for example, the Cane charter (dated to 1021) (Wisseman Christie 1999: 258–260).

²⁸ Wisseman Christie 1999: 246. Various regions, however, are constantly mentioned: Kalinga, already the source of cotton fabrics in ancient times (the term Kling, as Wisseman Christie points out, came to refer to Indians in general); Andhra Pradesh; southeastern, and southwestern India, as well as – in Southeast Asia – the Mōn country of lower Burma, Cambodia, and Champa.

²⁹ Chinese merchants were present much earlier, from the Tang period onward.

Beyond the Indian Ocean, maritime trade was in full growth from the tenth century onward due to the economic rise of China and the Song's interest in exchanges with the southern seas.³⁰ A restructuring of exchange networks occurred during the eleventh and twelfth centuries, marked by the relative decline of Srīwijaya and the expansion of Java. This allowed the states of the Thai–Malay peninsula and some regions of Sumatra to become more than simply regional collection centers: they were now able to enter international trade, thus attracting the interest of other states (the competition for control of the isthmus of Kra during this period has been mentioned previously; the Highlands of Minangkabau also acquired new importance [Manguin 2004: 1247]).

On Sumatra, the northwestern region (Barus) in all likelihood enjoyed relative autonomy.³¹ Various kinds of coins of the “Sandalwood Flower” type have been excavated, most made of gold.³² The site at Bukit Hasang, dated to between the twelfth and sixteenth centuries, has yielded glass from western Asia (with some of the glass from Iran containing cobalt from Germany), Egypt (or the Levant), and southern Asia (Dussubieux 2010). On the northeastern coast of Sumatra, Kota Cina, which became a significant entrepôt during the twelfth and thirteenth centuries, was another independent city-state, frequented by Chinese and Tamils. Kota Cina has yielded many Chinese coins, mostly dated to the northern Song period; these coins must have been reused as a means of exchange. Copper coins from Sri Lanka, dated to the late twelfth – early thirteenth century, have also been unearthed (Wicks 1992: 234), as well as glass from western Asia and Egypt (Dussubieux 2010).

Archaeological sites along the western coast of the Malay peninsula have revealed the preeminence of Kedah during the eleventh, and more importantly the twelfth and thirteenth centuries: here many Chinese ceramics have been excavated, as well as pottery from Southeast Asia, Indian beads, glass vessels, and raw glass from western Asia (at the site of Pengkalan Bujang).³³ According to Jacq-Hergoualch *et al.* (1996), from the tenth century onward, on the Malay peninsula's eastern side, the Nakhon Si

³⁰ Lombard has noted an increase in long-distance trade during the twelfth and thirteenth centuries, a factor of change in Southeast Asia (1990, 11: 32), but this increase had already begun in the eleventh century. According to Manguin, G. Coedès (1968) “sought the causes [of this increase] in the ‘adoption of the Indian civilization by an ever greater number of indigenous people, who slowly impregnated it with their original tendencies’, and at the same time ‘in the progressive disappearance of a refined aristocracy, the repository of Sanskrit culture’.” “This interpretation through a gradual change, in an almost internal process, of a culture thought of as originally ‘pure’ altering after contact with local civilizations, is not absolutely satisfactory, even though it partly mirrors reality” (Manguin 2004b: 1247).

³¹ While the city of Barus did not appear until the ninth century, a state which covered northern Sumatra may have developed in this region prior to the ninth century (Guillot 1998: 174). Dated to the tenth or eleventh century, a talisman-seal of Iranian origin found at Barus (site of Lobu Tua) may be the oldest Islamic inscription from the Malay world (Kalus 2000).

³² Some coins are inscribed with the letter *pa* (similar coins are known in Java). Others bear the letter *ma*, like the coins issued in Java during the early ninth century: “the Sandalwood Flower coinage [may have been] adopted in some parts of Sumatra prior to the eleventh century” (Wicks 1992: 232–234). Gold and silver coins of the Sandalwood Flower type, similar to coins from Barus, have been unearthed at Bengkulu, in Southwest Sumatra. Sandalwood Flower coins have also been discovered at Jambi (Wicks 1992).

³³ Lamb 1964; Leong Sau Heng 1990: 27; Jacq-Hergoualch 1992b: 45. The glass vessels probably contained aromatics and perfumes. The excavations have unearthed Buddhist stupas, and, more importantly, Hindu *vimāna* and *mandapa* revealing a Shaivite cult (there is no trace of Hinduism prior to the tenth or eleventh century).

Thammarat region took Chaiya's place in trade with countries abroad, perhaps due to silting in Chaiya's port. Tāmbraṅga was one of China's partners during the twelfth century, and maintained contact with a kingdom established in the Chao Phraya River valley after the mid-twelfth century.³⁴ A political entity called Grahi, however, is also mentioned at Chaiya, around 1183. Large quantities of Chinese ceramics have been unearthed (dated mostly to the southern Song and Yuan periods) along the coast of Tāmbraṅga. Song ceramics as well as tin ingots have also been excavated south of Selangor, at Jenderam Hilir.³⁵ Influenced by either Sumatra or Java, gold and silver coins of the "Sandalwood Flower" type (appearing first on Java at the end of the eighth century [see above]), probably issued on the peninsula, have been discovered at Krabi, Nakhon Si Thammarat, Suratthani (south of Chaiya), Satingphra, and Songkhla. This tradition was maintained until the thirteenth century, when it was replaced by Chinese copper coins and the gold coins issued in northern Sumatra. Coins of the same type are known in Sumatra (see above). A silver specimen has been found in Fustāt, showing the existence of trade between Egypt and Southeast Asia.³⁶

Java experienced renewed economic and political expansion at this time. The rising power of Java along long-distance exchange networks led to confrontations with Srīwijaya. The Javanese king Dharmavamsa launched a raid on Palembang in 990, to which Srīwijaya retaliated by attacking eastern Java in 1007, where Dharmavamsa was killed. The reign of Airlangga, a prince of Balinese origin and son-in-law of Dharmavamsa, proved to be the dawn of a phase of expansion for Java, within the context of a favorable international situation. Following a victorious struggle against "demons" allied with Srīwijaya for control of central Java, Airlangga set up a kingdom that was centered on eastern Java (Kahuripan) from 1028 to 1029.³⁷ This period saw a flourishing Javanese culture and a unified legal system. Under Airlangga's reign, sizeable hydraulic works were undertaken (especially involving containment of the Brantas River),³⁸ and the state encouraged the cultivation of new land through systems of endowments to religious institutions, implying transfers of tax rights (*sima* grants, see above). The multiplication of *sima* grants under Airlangga was most likely intended to weaken the power of local land elites, as well. In a chart dated to the middle of the eleventh century relative to the port of Mananjung (delta of the Brantas River), rice topped the list of goods stored for export (Wisseman Christie 1998b: 352). In addition,

³⁴ Jacq-Hergoualc'h *et al.* 1996. The unrest which occurred in Cambodia at Sūryavarman II's death (c. 113–1145?) hastened the development of an independent kingdom in the region of Lavo (Lopburi) (Luo-hu, in the Chinese chronicles). This kingdom sent an embassy to China in 1155, carrying elephants. It had already received a Chinese mission in 1115 (between these two dates, it may have fallen under Angkor's control) (Vickery 2004: 11).

³⁵ Along the eastern coast of the peninsula, Song ceramics have been unearthed at Kemaman, in Terengganu, and near the mouth of the Kelantan River.

³⁶ Wicks 1992: 225, 226. Wicks notes the absence of standardized coinage in the region under Srīwijaya's influence, a fact that this author connects to the very nature of this "state," which was a "confederation of harbor principalities" controlling fluvial systems, with no true centralized political administration (Wicks 1992: 241).

³⁷ Hal 1992: 211. Airlangga's military action went along with a transfer of population from central to eastern Java. Airlangga's capital, Kahuripan, was located 60–80 km away from the mouth of the Brantas River. Airlangga appears to have been the first king who bore the title "universal sovereign," *ratu cakravartin*.

³⁸ Lombard 1990, 111: 22. See the inscription at Kelagyan, carved in 1037.

rice was used as a means of exchange (Wicks 1992: 283). The inscription at Manañjung also reveals a standardization of weights and measures as well as price regulation on merchandise (Wicks 1992). These inscriptions clearly reflect the increasing monetization of the Javanese economy under Airlangga (Wicks 1992: 282).³⁹ Local merchants were employed as tax collectors.⁴⁰ Besides tin from the Thai–Malay peninsula, spices from the Moluccas, and sandalwood and copper from Timor, Java exported pepper and dye from safflower (*Carthamus tinctorius* L.), primarily toward China. Introduced from India, pepper and safflower appear to have been grown on Java as early as the ninth century (local long pepper was also exported). During the twelfth century, Java overtook South India as the main source of pepper for China.⁴¹

The boom in trade with China accompanied the arrival of Chinese money: as early as the late eleventh century, Song officials were alarmed at the sizeable quantities of copper coins leaving the country for the southern seas, for Java in particular. The presence of the term *satak*, “string of coins,” in inscriptions from Java and Bali dated to the eleventh century indicate that Chinese coins were beginning to be used locally as currency.⁴² While the ceramics found in Java during the ninth and tenth centuries show similarities with Indian forms, progress in imports of Chinese ware became obvious during the late tenth and eleventh centuries. On the route to China, Java maintained relations with Champa and, further north, with the Dai Viêt kingdom.

The sea of Java lay at the junction of various trade routes. This is well attested by the recent discovery (2005) of an Austronesian shipwreck off Cirebon (western Java), dated to the late tenth century; its rich contents are still being inventoried. The ship, probably overloaded, carried silver and tin ingots, iron, ceramics (stoneware covered with olive-green glaze, often called “Dusun,” makes up 95 percent of the find), glass, jewels, parade weapons, bronze items, precious stones, lumps of lapis lazuli, as well as orpiment–realgar, Chinese coins, mirrors, and elephant tusks of as-yet undetermined origin (Liebner 2014: 211–212; Zhao 2015b). A gold ring bears a South Indian inscription. A small mold shows writing in Arabic (Musée Royal de Mariemont 2009, siren.mariemont.museum). The Cirebon ship may have measured over 30 meters in length. This discovery adds to the 1997 discovery of the Intan shipwreck located between Bangka and Jakarta, and dated to the tenth century. Here again, the ship was Austronesian, and probably originated in Palembang; it carried silver ingots, mirrors, iron, and ceramics from China, tin ingots from the Thai–Malay peninsula, ceramic ware from Thailand, glass from the Muslim world, Buddhist statuettes, elephant tusks

³⁹ A. van Aelst (1995: 367) also emphasizes the existence of low value, fractional units reflecting a process of monetization of the economy from the tenth century onward. J. Wisseman Christie (1998b: 354) sees an evolution in the content of the *sīma* charters during the eleventh century, which show the increasing wealth linked to trade, with the court trying to keep “separate status from wealth.”

⁴⁰ They probably paid their dues to the king in cash or in the form of imported prestige goods (Wisseman Christie 1998b: 361).

⁴¹ Wisseman Christie 1999: 227. Exports of Java and Bali toward China also included dye from *wungkuḍu* (*Morinda citrifolia* L.). During the tenth century, exports of agricultural products from Bali appear to have been significant (rice, cotton, *Vigna radiata*, sesame, dyes from *Morinda citrifolia* and safflower) (Wisseman Christie 1999.).

⁴² Wicks 1992: 283. The first inscription indicating this in a clear way goes back to the fourteenth century.

from Africa, aromatic resins, and Indonesian bronzes (Flecker 2004–2005). The Belitung shipwreck, also dated to the tenth century, has already been mentioned.

The Chola attacks conducted in 1017⁴³ and 1025 led Srīwijaya to make peace with Java, after a period of conflict. During this time, Srīwijaya sent three embassies to China in 1016, 1017, and 1018. A rapprochement came about between Srīwijaya and the Chola kingdom during the second half of the eleventh century. A Chola raid on “Kaḍāram” (possibly Kedah) in 1068 may have been requested by a faction in Srīwijaya (see above). Chinese chroniclers wrongly state that at this time the Chola country “was a vassal of San-fo-ts’i” (Coedès 1968: 148).^{44,45} In 1088, the sending of two ambassadors by Srīwijaya to the court of the Chola king confirmed the warming of relations between the two powers. Srīwijaya enjoyed a period of revival by the late eleventh century; its capital was probably in Jambi since 1079 (or possibly earlier, but two distinct kingdoms may also have coexisted, in Palembang and Jambi).⁴⁶ The *Lingwaidaida* mentions an embassy from Zhanbei (Jambi) to China in 1079, and still others in 1082 and 1088 (Hirth and Rockhill 1911: 66 n. 18; Coedès 1964a: 325). According to an inscription found at Canton and dated to 1079, an emissary from Sanfoqi/Srīwijaya (perhaps Palembang) was responsible for restoring a Daoist temple there; the Mahārāja of Sanfoqi donated “600,000 gold coins” for this restoration.^{47,48} According to the *Pingzhou ketan*, a Chinese book whose foreword is dated to 1119, Sanfoqi exerted strict control over trade: “In recent times, Sanfoqi has established a sandalwood monopoly, and the ruler orders merchants to sell to him. The product’s market value increases several times. The foreign merchants do not dare to buy privately.” Srīwijaya “was possibly copying the Javanese and Balinese practice of compulsory purchases, first documented in Old Javanese and Old Balinese inscriptions of the tenth and eleventh centuries” (Wicks 1992: 231).⁴⁹ Gold coins of the “Sandalwood Flower” type, discovered in Jambi, may have been issued at this time (see above).⁵⁰

⁴³ Nilakanta Sastri (1949: 79 n. 13) has expressed strong reservations about the existence of this first expedition.

⁴⁴ This may be a misreading of the Chinese text.

⁴⁵ On the contrary, some authors have stated that Sanfoqi was under Chola control; see Hall 2011: 131.

⁴⁶ Wolters 1966: 225–239. D. G. E. Hall (1981) points out that in 1079, China received missions from both Jambi and Palembang, but in 1082, Jambi alone sent an embassy. M. Laffan (2004: 17), however, states that the capital of Srīwijaya shifted from Palembang to Malayu after the Chola attack in 1025. He notes that Idrīsī may refer to Malayu when he describes “a great island called Qamar with its capital Malāy.” Buddhist temples were built at Muara Jambi during the eleventh century. The site has yielded great quantities of Chinese pottery dated to the twelfth and thirteenth centuries.

⁴⁷ Nik Hassan Shuhaimi 1990: 77. Coedès (1964a: 271–272) signaled that, according to the *History of the Song*, a dignitary from Srīwijaya called Ti-houa-k’ie-lo, a “regular transcription of Divākara,” arrived in China in “1067.” Some authors, notes Coedès, wanted to see in this name that of a Chola prince (the future King Rājendradevakulottunga) who may have served at the head of the Srīwijayan state. Today, this interpretation seems implausible. The inscription from Canton gives “Ti Hua Ka Lo” as the ruler in Sanfoqi, who sent a close relative called Sha Wen to China before 1067 and in 1067; Sha Wen returned in 1069 and in 1070, to oversee work on the temple in Canton; the temple was finished in 1079 (Tan Yeok Seong 1964).

⁴⁸ Moreover, an embassy from Poni (Brunei, Borneo) arrived in China in 1082, according to Zhao Rugua (Hirth and Rockhill 1911: 157).

⁴⁹ S. Pollock (2006) postulates processes of “vernacularization” at the beginning of the second millennium, but inscriptions in Old Malay had occurred earlier (Manguin 2010: 179).

⁵⁰ In contrast, Palembang yielded no coins locally minted.

At the beginning of the twelfth century, China itself was more active in the expanding trade of the southern seas. “The transfer of the Song capital to Hangzhou in 1127 and the development of a mercantile and urban economy in the lower Yangtze was no doubt connected to trade expansion” from which Java benefited (Lombard 1990, 11: 31). Chinese merchants settled in Southeast Asia;⁵¹ Wang Yunmao, a man from Quanzhou, thus left for Champa and made a fortune there (Wicks 1992: 215). In 1178, Wang dispatched his agents on a ship which remained abroad for ten years. They returned in 1188; “they had obtained profits amounting to several thousand percent” (Wicks 1992: 215). From the early twelfth century, reflecting the Song expansion, Chinese quarters appeared in the ports of the Straits of Malacca, Sumatra, peninsular Malaysia, and Java (Miksic 2004a: 248).

China had a crucial influence on the field of navigation.⁵² At about this time, Indonesian ships were adopting more rigid hulls, which the Portuguese would describe in the sixteenth century. The planks of these hulls were joined by means of dowels; the use of fastenings (made of coconut fibers) was progressively abandoned. The thwarts were fixed to the frames and strakes by wooden dowels (or sometimes iron nails).⁵³ The hulls had several layers of planks, like those on Chinese vessels. Large Malay and Javanese ships, however, kept quarter rudders rather than adopting the Chinese stern-post rudder. Each of these ships had several central masts, and a bowsprit, “on which a spritsail was rigged”: these already appear in depictions of ships from Borobudur (Manguin 1993: 267). A hybrid tradition thus developed in Southeast Asia and the China Sea, as shown by shipwrecks dated to the fourteenth and fifteenth centuries (see below).

In 1154, Idrīsī reveals developments in relations between China and insular Southeast Asia, as well as a Chinese presence and Java’s growing influence:

It is said that when the state of China’s affairs was disturbed by upheavals and when tyranny and confusion prevailed in India, the inhabitants of China shifted their trade to Javaga and adjacent islands controlled by the latter . . . They entered into relationship and befriended the inhabitants [of these islands], because of their ease in trade. This is the reason why this island [Java?] is so densely populated and visited by foreigners.

⁵¹ According to A. Reid (1993a), Chinese merchants played a role in the decline of Srīwijaya on long-distance networks; however, this decline is more likely to be seen in the competition of Srīwijaya with other states of Southeast Asia.

⁵² The word *jong* is mentioned in an inscription in Old Javanese dated to the eleventh century; it was already present in Java during the ninth century (see above). According to P.-Y. Manguin, the term is “probably of Malay or Javanese origin,” and not Chinese (1993: 266 n. 25). However, this author acknowledges that the word *jong* has not been reconstructed in PMP. While Manguin places the technical transformations during the thirteenth and fourteenth centuries, it is reasonable to assume that they started earlier (however, the boat remains found at Kota Cina still show fastenings made of fibers belonging to the older tradition; Manguin 1993: 257, 259). Manguin (1985a) signals the existence of a term *jhong* in Bengal, but it refers exclusively to a type of vessel used for inland navigation.

⁵³ “It seems that ships destined for long-distance trade, during the fifteenth and sixteenth centuries, were already entirely dowelled; ties made of vegetal fibers then stopped being used for the joining of the structural elements of the hull” (Manguin 2000a: 44). As Manguin notes, “improvements may well have been introduced [earlier] in larger trading vessels, such as the Cirebon ship, where more structural strength was required to carry large cargoes” (2016: 62).

After King Airlangga's reign, a certain amount of political fragmentation occurred. A capital in the region of Kediri gave its name to a dynasty that ruled until 1222. Singhasari was later the seat of another capital, further east (1222–1292).⁵⁴ The Chinese treaty *Lingwaidaida* (1178) written by Zhou Qufei, "dealing with the southern countries, has a notice on Shepo [the kingdom of Kediri] and signals merchandise transiting through this kingdom: pepper [in fact produced in Java], sandalwood, cloves, nutmeg and aloes[wood]" (Lombard 1990, 11: 31). Zhou Qufei writes:

Of all the wealthy foreign lands which have great store of precious and varied goods, none surpass the realm of the Arabs (Ta-shih). Next to them comes Java (She-p'o); the third is Sanfo-ch'i [Sriwijaya]. (Coedès 1968: 180; Schottenhammer 1999: 283)

Zhao Rugua's *Zhufanzhi* (1225) emphasizes Java's wealth, its many agricultural products, "the abundance of the spices and exotic products that are found in its ports" as well as the quality of its silks:⁵⁵

They cast coins in an alloy of copper, silver, white copper, and tin . . . Foreign merchants use in trading gold and silver of various degrees of fineness, vessels made of gold and silver, silk stuffs, black damasks, orris-root, cinnabar, copperas, alum, borax, arsenic, lacquer-ware, iron tripods, and blue and white porcelain ware . . . There is a vast store of pepper in this foreign country and the merchant ships, in view of the profit they derive from that trade, are in the habit of smuggling copper cash out of China for bartering purposes. (Hirth and Rockhill 1911: 78)

It is clear that Song China bought such large quantities of spices in Java that the outgoing flow of copper gave cause for alarm. Java used imported borax for the manufacturing of glass and glazes, arsenic for metalworking processes, cinnabar for dying silk, and alum for the production of printed fabrics.

Java developed textile production at this time, as well as metalworking and glass manufacturing. The island exported fabrics which at times reflected Indian tastes, as well as other influences: by the late twelfth century, gold embroidered fabrics were imitating Persian textiles. Java managed to export silks to China (Wisseman Christie 1999: 240–241, 268 n. 69). Iron rods were imported for local ironworking (a wrecked vessel from the thirteenth century was found in the Java Sea, containing a cargo of iron rods) (Wisseman Christie 1999: 227, 266 n. 16). A definite Chinese influence is felt in ceramic production and in the manufacture of glass beads. Trade with India and China thus had an impact on production and consumption patterns. Importations of various kinds of Indian cotton cloth remained significant throughout this time.

⁵⁴ Between the ninth and thirteenth centuries, eastern Java did not see the development of any significant urban center in the hinterland, maybe because a dispersed pattern of settlements was more efficient for the development of rice-growing regions (Hall 1992: 213). The tradition relating to the crowning of Ken Angrok, victorious over the king of Kediri, highlights the importance of Brahmins. It was not enough to overcome: the seizure of power had to be legitimized by Brahmins, who performed efficient rituals (Ras 2001).

⁵⁵ Lombard 1990, 11: 36. Java's agricultural potential was the basis of the demographic and economic growth on the island at least since the early Christian era. As in other regions of Southeast Asia, the temples and the territories they controlled, freed from taxes, played a role in this development. However, inscriptions indicate that the number of people who were allowed to live in these free zones was limited by the state, which was anxious to contain their power of attraction (an inscription to that end can be seen as early as 929 CE) (Miksic 2004a: 246). During the thirteenth century, Java exported rice toward Sumatra.

The monetization of the Javanese economy progressed from the eleventh century onward. The use of Chinese coins has been signaled above. In addition, Zhao Rugua indicates the presence of gold and silver coins⁵⁶ at Sugidan (Sukadana, Central Java), giving their equivalence in rice. According to the *Songsbi*, the government controlled the rice–silver exchange rate. Wicks notes, however, that “variability in the price of pepper at Sugidan demonstrates that exchange rates were not immune to the pressures of supply and demand.”⁵⁷ Javanese money (gold, silver) was used in foreign transactions. Javanese coins dated to this period have been recovered on Bali, Sumatra, in southern Thailand, and in the Philippines.⁵⁸

Java and China traded with many islands. Zhao Rugua sheds light on the modalities of this trade and on the products exchanged in the main centers. In Poni (Brunei), merchants arriving on ships were required to offer gifts to the king; after the prices of goods were fixed, the king signaled the start of transactions. Prior to the ships’ departure, the king gave out products matching the value of the gifts he had previously received. This organization of trade was also enforced elsewhere in insular Southeast Asia, as well as along the East African coast. Zhao Rugua describes relations linking Poni, Sanfoqi, and Shepo (Java). Poni appears to have used gold and silver currency. “The country produces camphor of four varieties, wax, lakawood, and tortoiseshell; and the foreign traders barter for these trade–gold and trade–silver [money], imitation silk brocades, . . . glass beads, glass bottles, tin, ivory armlets, leaden sinkers for nets, lacquered bowls and plates, and green porcelain” (Hirth and Rockhill 1911: 156).⁵⁹

The *Zhufanzhi* also describes trade growth in the Philippines (Mai), influenced by both Java and China. Large quantities of Song and Yuan ceramics have been discovered throughout the archipelago, notably at the Manila site, which was occupied as early as the eleventh century. At Butuan (Mindanao Island), a community engaged in long-distance trade sent a tributary embassy to China at the beginning of the eleventh century (in the *Songsbi*, this political entity is described as having regular links with Champa).⁶⁰ A gold deposit near Butuan may explain the development of this site. Gold coins, some from Java and others minted in the Philippines imitating Javanese coins (using the standard of weight *māṣa* [2.4 grams]), have been unearthed on Luzon, as well as on Marinduque, Samar, Leyte, and Mindanao.⁶¹

⁵⁶ Zhou Qufei’s *Lingwaidaida*, which Zhao Rugua has used, also notes the presence in Java of cast coins made of an alloy of copper (perhaps local copies of Chinese coins) (Hirth and Rockhill 1911: 78, 81; Wicks 1992: 285).

⁵⁷ Wicks 1992: 285; Hirth and Rockhill 1911: 82.

⁵⁸ van Aelst 1995: 366–367. This author signals a depreciation of gold and silver coins during the twelfth and thirteenth centuries (analyses show that the coins often contain only 20% silver against 70% copper, and 50% gold).

⁵⁹ Along with Poni, Zhao Rugua gives the names of islands which may correspond to Sulawesi and the Moluccas, where ships went to trade. Chinese glass beads were dominant on the Southeast Asian market from 1200 onward.

⁶⁰ The Butuan site contained Chinese wares dated to between the ninth and twelfth centuries. Craftsmen there worked glass and various metals (Bacus 2004: 269–270). The site has yielded remains of boats dated to between the thirteenth and fifteenth centuries (a dating in the third century suggested for a ship has been rejected by Manguin 1996, but accepted by Bellwood *et al.* 2007).

⁶¹ These coins, termed “Piloncito,” show a design of “sesame seed,” and bear the letter *mā*, in Pallava script (for *māṣa*) (Wicks 1992: 290). Various denominations are known. Coins often have a weight lighter than the expected 2.4 g. This type of coin was still in use when the Spaniards arrived during the sixteenth century.

Srīwijaya's position appears to have weakened during the second half of the twelfth century, perhaps due to rivalry between Palembang and Jambi, and more importantly, due to Java's growing influence and Burmese expansion. Following a sizeable mission in 1157, the embassy from Sanfoqi (Srīwijaya-Palembang, or perhaps Jambi) to China in 1178 was the last one mentioned in the *History of the Song*.

The *Zhufanzhi*, however, writes of Sanfoqi and of Lanwuli (or Lanli) (Lambri or Rāmnī, northern Sumatra), as intermediaries between China, India, and the "Arab" (Dashi) world, which dominated long-distance trade:

It takes a Quanzhou [Fujian, China] ship over forty days to reach Lanli [Lambri]; there the winter is spent, and the following year, a further voyage of a month will take it to this country [Nanpi, or the Malabar coast]. (Hirth and Rockhill 1911: 89)

The products of the country [Dashi] [the Arab world] are for the most part brought to Sanfoqi where they are sold to merchants who forward them to China . . . The products of the country consist in pearls, ivory, rhinoceros horns, frankincense, ambergris, patchuk, cloves, nutmegs, benzoin, aloes, myrrh, dragon's blood, asa-foetida, borax, opaque and transparent glass, coral, cat's-eyes, gardenia flowers, rose-water, yellow wax, soft gold brocades, camel's hair cloth, cottonades and foreign satins. (Hirth and Rockhill 1911: 114, 116)⁶²

On the topic of Sanfoqi, Zhao Rugua also writes: "If a merchant ship passes by without entering [their port], their boats go forth to make a combined attack. This is the reason why this country is a great shipping center" (Hirth and Rockhill 1911: 62).⁶³ "They use chopped-off lumps of silver in their business transactions" (Hirth and Rockhill 1911: 60). Zhao Rugua lists countries which are "dependencies" of Sanfoqi, in particular on Sumatra (Lanwuli [Lambri] . . .); on the Thai-Malay peninsula (Dengyanung [Terengganu], Lingyasijia [Langkasuka], Jilandan [Kelantan], Foluoan [Kuala Berang?], Danmaling [Tāmbalinga?], Jialuoxi [Chaiya], Pengfeng [Pahang], Jiloting [which may correspond to the Māyirūḍingam of the Chola inscription at Tanjore] . . .); western Java (Sindo [Sunda]);⁶⁴ and also Silan (Sri Lanka), which used to send a yearly tribute.⁶⁵ Jambi was probably the capital of the state at this time since Zhao Rugua gives Palinfong (Palembang) as the vassal of Sanfoqi.

The role played by the Thai-Malay peninsula as an interface for various areas has been noted above. Zhao Rugua devotes four records to states on the peninsula: Dongliumei, Danmaling, Lingyasijia, and Foluo'an, the main entrepôt for merchandise from western Asia, along with Srīwijaya (Hirth and Rockhill 1911: 67–70). During the fourteenth century, Wang Dayuan also describes trade on the peninsula. Zhao Rugua signals as exports: aloeswood, lakawood, ebony, sandalwood, ivory, rhinoceros horns, wax, and camphor. Wang Dayuan also mentions tin (probably forgotten by Zhao Rugua), tortoiseshell (same remark), betel nuts, and cotton. During the thirteenth century, the states of the Thai-Malay peninsula imported porcelain vessels,

⁶² Hirth and Rockhill 1911: 114, 116ff., 60–62; Schottenhammer 1999: 283.

⁶³ This practice had already been mentioned by Zhou Qufei. During the fourteenth century, Ibn Battūta (1982, 111: 305) notes it for Qāqula (Takola), which imposed a tribute on each junk sailing through the strait.

⁶⁴ A fortified site has been found at Banten Girang (tenth–fifteenth century) (Guillot *et al.* 1994).

⁶⁵ Hirth and Rockhill 1911: 62, 65–66, 73. On the identifications of the states of the Thai-Malay peninsula, see Wheatley 1961: 70–72.

silks, lacquered objects, gold, silver, iron, rice, salt, sugar, wheat, and spirits; to those goods cotton fabrics, copper cauldrons, pearls, and musical instruments were added during the fourteenth century.⁶⁶ In Langkasuka, according to Zhao Rugua: “First they calculate the value of their articles according to their equivalents in gold and silver, and then engage in barter of these articles at fixed rates.” Wicks points out that “this is the earliest example within island Southeast Asia at least, of an extrinsic measure of value being applied to a barter trade” (Wicks 1992: 227).⁶⁷ The use of gold as a means of measuring value reflects an influence from Sumatra or Java (continental Southeast Asia mostly used silver).

Moreover, Sinhalese literature from the eleventh and thirteenth centuries mentions contacts between the Malay people of the Thai–Malay peninsula and the Sri Lankans. A Buddhist king of the peninsula, Chandrabhānu, may even have launched a military expedition against Sri Lanka in 1247, in order to seize relics of the Buddha.⁶⁸ Chandrabhānu and another “Jāvaka” may have reigned for some time over northern Sri Lanka.

A First Phase of Islamization

Muslims were present wherever trade was active: Śrīwijaya, Java, as well as Champa, where Pāṇḍuranga housed a Muslim community at the beginning of the eleventh century. Starting in the twelfth century, Islam structured the trade networks of Southeast Asia and of the China Sea. Chinese (often of mixed origin) who had converted to Islam played a significant role in the Chinese expansion under the Song and the Yuan. They were present in the Philippines, Borneo, Java, and Sumatra. A funerary stela bearing Chinese script and belonging to “a man called Pu (Abu?), a Muslim originally from Quanzhou, who died in 1264” has thus been discovered in Brunei (Chen Da-sheng 2000). The tomb of a Brunei sultan, bearing an Arabic inscription dated to the early fourteenth century, has also been discovered. D. Lombard has correctly pointed out the cosmopolitanism of the Muslim networks. He mentions the figure of Abū al-‘Abbas al-Ḥiğazī. After living for forty years in China, al-Ḥiğazī “owned a fleet of ten vessels in the Indian Ocean . . .; he had got seven sons in various countries of the Indian Ocean, who acted as his agents.” “The fleet was destroyed by a storm; while only one vessel escaped, this vessel, loaded with porcelain

⁶⁶ Wheatley 1961: 74; Wicks 1992: 239, 240. Cotton fabrics appear to have been significant during the fourteenth century. They came from various countries: India, Champa, Java, and Hainan. Wicks has pointed out that fabrics were used as a means of exchange, a measure of value, and a means of payment in some parts of the Thai–Malay peninsula.

⁶⁷ Moreover, Marco Polo writes about the kingdom of Lochac [Langkasuka, or the region of Lopburi in Thailand, or possibly Borneo]: “In this country gold is abundant to a degree scarcely credible . . . From hence are exported all those porcelain shells which, being carried to other countries, are there circulated for money, as has already been noted . . . These porcelain shells do not originate in this country but are brought from India by merchants” (1980, 11: 410; quoted by Allibert 2000: 59). On Lochac, see Suarez 1999: 106–107.

⁶⁸ Paranavitana (1961: 289) relates Chandrabhānu to the name “Sendemain” given by Marco Polo to the king of Sri Lanka. The name “Chandrabhānu” – which is in fact a title – is mentioned in an inscription from Nakhon Si Thammarat dated to 1230 (Jacq-Hergoualc’h *et al.* 1996: 420, 423, 428ff.).

and aloeswood, was worth so much money that Abū al-'Abbas quickly saw his wealth restored" (Lombard 1990, 11: 31).

Zhao Rugua mentions "Arab settlements" at Foluo'an and in southern Sumatra. The diffusion of Islam in India during the thirteenth century led to a strengthening of the Muslim networks in Indonesia, especially in connection with South India, Bengal, and Gujarat. Islam took root in northern Sumatra, where a sultanate was created at Samudra (Pasai). Adherence to Islam, now dominant along the merchant networks, certainly gave the king new internal legitimacy, through his role as intermediary with an efficient, powerful external world which was the source of spiritual and material goods. The name of the founder of Sumatran Islam, Merah Silu, mentioned in the *Chronicle of the Kings of Pasai*, refers to the name "Chulia" given to Muslims – who were often Shias – in South India. K. R. Hall also points out the influence of Sufi currents in Islamic expansion, at Pasai and elsewhere in insular Southeast Asia.⁶⁹ Northern Sumatra developed plantations of pepper, originally imported from the Malabar coast (Hall 2001c: 199). In addition, a legend according to which silkworms were transformed into gold and silver by Merah Silu doubtless refers to the flourishing silk industry at Pasai, which used local worms, as well as to the issuance of coins.⁷⁰ As was the case for other states in Southeast Asia and the Indian Ocean, imported textiles played a crucial role in the monarchic system of Pasai: "The ruler's ability to acquire textiles through trade, warfare or local production, combined with his distribution of them as rewards for service, decisively reinforced the monarch's efforts to institute a stable, hierarchical and court-centered social order" (Hall 2001c: 201). Fabric – that is to say, garments, given their role in ceremonies – marked social status. The redistribution of imported goods – whose acquisition by the ruler revealed his symbolic efficiency – was also believed to confer a modicum of the king's spiritual power upon the recipients of these goods. The tomb of the first sultan, Malik al-Ṣāliḥ (Merah Silu), is dated to 1297. At that time, the sultanate issued a gold coinage (minted according to Java's *kupang* standard [0.6 g]); however, gold and tin under the form of metal – not minted – appear to have been used in exchanges. In addition, during the fourteenth century a tin coin *kasha* (from the Tamil *kasu*, referring to a coin) was issued.⁷¹ In 1346, Ibn Battūta writes: "This population [Samudra] sells and buys using lumps of tin and Chinese unmelted native gold."⁷² Marco Polo notes that camphor from Fansur was "sold by weight against the same quantity of gold." While Polo indicates as Muslim the kingdom of "Ferlec" (Perlak, on the southeastern coast of

⁶⁹ Hall, 2001c: 209, 220–221. See also Johns 1961. The fact that Sufis focused on the possession of magical power linked to mystical experience allowed for a synthesis with Hindu-Buddhist ideas. The doctrinal flexibility of the Sufis was also noticeable in India (in Gujarat, for example).

⁷⁰ *Hikayat Raja Raja Pasai*: 51; Reid 1988: 92–93.

⁷¹ This name reveals the Tamil influence on northern Sumatra (van Aelst 1995: 369). In southeastern Sumatra lead coins appeared.

⁷² Ibn Battūta 1982, 111: 296. Gold was rather of local origin. Ibn Battūta visited Samudra in 1346. He indicates that the sultan "professes the doctrine of Chāfi'y" (1982, 111: 297). From Samudra, Ibn Battūta went to Qāqula [Takola], where the sultan "was as infidel" (1982, 111: 306). This port offered "the best quality of aloeswood," along with Qamārah (Cambodia?). A load of aloeswood was exchanged for a cotton fabric roll (probably from India). Ibn Battūta also notes: "Among these people, cotton fabrics are more expensive than silk." From Qāqula, a junk carried Ibn Battūta to Phan Rang, in Champa.

Pasai), he mentions no Muslims either in “Sumatra” (Samudra) or “Lambri” (Lāmuri).⁷³ As early as 1281, however, Melayu (Jambi), which tried to restore the ancient power of Srīwijaya – which was greeted with hostility by the Javanese (see below) – sent Muslim emissaries to China.

The oldest Muslim tombs in Southeast Asia reveal a western Indian influence, especially from Gujarat, whose merchants were active in the spice trade. Muslim traders from the Malabar and Coromandel coasts also played a significant role in trade networks. In addition, a Persian influence can be seen in these “chains of mixed communities” along India’s coasts (Guillot 2004). Muslims settled along the coasts of the Thai–Malay peninsula, as revealed by an inscription on stone at Kuala Brang (Terengganu) dated to 1308 or 1317, on the eastern coast of this peninsula. It was via the merchant networks, and thus via the coastal cities, that insular Southeast Asia and the Thai–Malay peninsula became islamized during the thirteenth and fourteenth centuries. Southern Arabs migrated to this region, especially from 1300 onward.

The Impact of the Mongol Expansion: Mojopahit Is Created

Continental Southeast Asia felt the effects of the Mongol expansion during the thirteenth century. In 1253, the Mongol conquest of Yunnan (where the kingdom of Dali had succeeded the ancient kingdom of Nanzhao [937]) unleashed a stream of refugees.⁷⁴ Thai populations known as Shan entered Burma. During the late 1270s, Mongol expeditions launched toward Pagan weakened this state.⁷⁵ During the 1280s, a new Mōn kingdom took root at Pegu. There were also internal reasons for the Burmese collapse, such as the excessive power wielded by provincial governors and religious institutions. By 1280, these institutions had taken over from one-third to two-thirds of the land, often tax free. The country was also affected by a deteriorating climate from 1270 to 1280.⁷⁶

Changes affected other regions of Southeast Asia. Thai principalities, in the Menam basin, freed themselves from the Khmer grip,⁷⁷ and the kingdom of Angkor lost its power. As was the case at Pagan, the disintegration of the Khmer Empire also had internal causes. Too much land had been granted to temples and to the aristocracy. Ecological (soil erosion) and climatic factors worsened the imbalances; a process of aridification occurred around 1280, becoming more pronounced during the fourteenth century.⁷⁸ Coastal states benefited from the decline of agrarian powers inland; they also

⁷³ Marco Polo 1980, III: 412ff. The kingdom of Lāmuri was among the states which were vassals of Srīwijaya during the eleventh century.

⁷⁴ The Thai, however, retook part of the Yunnan during the period of Yuan decline. Trade routes which ran across this region were a major issue, as was Yunnan’s wealth in gold and silver.

⁷⁵ The purported pillaging of Pagan by the Mongols in 1280, however, is now questioned (Aung-Thwin 1998; Gutman and Hudson 2004: 170).

⁷⁶ Lieberman 2003: 120–121. It appears that global cooling occurred at this time (Moberg *et al.* 2005) (see above).

⁷⁷ “It is undoubtedly no mere coincidence,” as Coedès notes, “that this alliance of the three Thai chiefs took place in the same year [1287] that Pagan was taken by Sino-Mongol troops” (1968: 195). But here we may be dealing in mythology, not in history. The formation of small Thai client states on the upper Mekong was in any case encouraged by the Mongols (Lieberman 2003: 241).

⁷⁸ Lieberman 2003: 238–240. As Lieberman points out (2009: 33), “Pagan and Angkor lay in dry zones” and were more susceptible to climate change. According to D. Godley (1997), an overall aridification of

took advantage of an expanding maritime trade at this time. The *History of the Yuan* dates the first diplomatic relations between China and a coastal state called Xian to 1282, placing Xian in the eastern part of what is now Thailand and western Cambodia (Vickery 2004: 3).⁷⁹ In 1282 and in 1289, Xian “welcomed Chinese refugees. It sent eight missions to China between 1292 and 1323” (Pelliot 1904: 243; Reid 2006: 7). Thus, in 1294, the “king” of Xian was summoned to China, and the ruler of Phetchaburi (Phetburi) also sent envoys to China (according to Reid, Phetburi may in fact have been Xian). In 1299, Xian and Luo-hu (Lavo = Lopburi) together dispatched embassies to China (Reid 2006: 14). The states of the Gulf of Thailand thus maintained active contacts with Yuan China.

The agrarian indianized states of Indochina – in decline during the second half of the thirteenth century – relied upon a Sanskritized culture and upon Buddhism of the Greater Vehicle. Buddhism of the Lesser Vehicle, which used the Pali language, took the upper hand under its Theravāda Sinhalese form in the kingdom of Sukhothai during the late fourteenth century.⁸⁰ This branch of Buddhism was more open to external influences and exchanges. It had been thought, based upon an inscription from Sukhothai, that a king called Rāma Khamhaeng (1283–1317) had extended this kingdom onto the Thai–Malay peninsula (as far as Tāmbraalinga), at the expense of Jambi–Srivijaya and of Java, the latter of importance because it sought to control the Straits. K. Piriya (1991) and M. Vickery (1991), however, have shown that this inscription was most likely forged, and that this king probably never existed. Sukhothai remained a small inland kingdom.⁸¹ The state of Xian, by contrast, appears to have launched raids on Jambi. According to the *History of the Yuan*, “the people of Sien [Xian] and Ma-li-yeul [Malayu = Jambi] had been killing each other for a long time. All at this time submitted [to China]. There was an imperial edict instructing the people of Sien: ‘Do not hurt the Ma-li-yu-eul in order to keep your promise’” (Pelliot 1904: 242). The *Hikayat Raja-raja Pasai* chronicle (Chronicle of Pasai) also mentions an unsuccessful “Thai raid” on this town around 1295 (Hall 2001c: 208).

The success of the Thai states at this time seems to correlate with the introduction of new irrigation techniques, making it possible to extend cultivation to lands which had previously lain too high or too low. Agricultural growth led to demographic growth,

Indochina began around 1280 and continued until the end of the fifteenth century. For M. Vickery, the evolution observed in Cambodia was first of all a sign of social and economic changes reflecting the new orientation of states increasingly orientated toward maritime trade (2004: 2).

⁷⁹ Xian transcribes the term “Syām,” found as early as the eleventh and twelfth centuries in Cham and Khmer inscriptions; however, this term was never used by local populations of the Gulf of Thailand (Vickery 2004: 17). For Vickery, the origin of the term is geographic and does not derive from the Sanskrit *syāma*, “dark-skinned,” as is often claimed.

⁸⁰ Gaborieau 1995a: 449. Theravada means “the Teaching of the Elders” in Pali. This branch claims to be closer to early Buddhism than other existing Buddhist traditions. Theravāda Buddhism may have been present at Tāmbraalinga as early as the twelfth century, as well as at Pagan (see above).

⁸¹ Sukhothai was just one of the emerging small Thai kingdoms, alongside Phayao, and Lan-na, further north. The Thai kingdoms issued no currency. Value was measured in cowries, which also were the usual means of payment. The Thai may have adopted the use of cowries before they settled in the upper basin of the Menam River during the twelfth or thirteenth century (Wicks 1992: 172). Cowries were also used at Lopburi during the thirteenth century (Wicks 1992: 182).

which, combined with war-making capabilities, gave the Thai an advantage over their neighbors: all this may help explain their ensuing expansion.

The change of power in China had consequences for Southeast Asia. The founding of the Mongol Yuan dynasty was accompanied by expansionism – and not only via merchant networks and peaceful means. Emperor Kūblai Khān attempted – unsuccessfully – to invade the Vietnamese kingdom of Dai Viēt, first in 1283–1285 and again in 1287–1288. In Dai Viēt, the new Tran dynasty replaced the Ly in 1225. The state exerted more effective political control than it had during the Ly period, relying upon a (limited) adoption of Chinese administrative procedures.⁸² While not yet a centralized state, this coherence in the Dai Viēt polity allowed armies raised locally by Tran princes – or by princes allied with the Tran – to fight off Mongol expeditions.

In insular Southeast Asia, Kūblai Khān had to deal with the Javanese power, as reflected on a recently discovered thirteenth-century Muslim map showing a large island called “Qamar” in Southeast Asia.⁸³ Kertanāgara, ruler of Keḍiri in 1254 and later king of Singhasari,⁸⁴ developed an expansionist policy, perhaps in order to offset the Sino-Mongol Empire’s growing power, and to break the hold of either Srīwijaya or Jambi on the trade networks. In 1275, Kertanāgara launched a military expedition against Jambi. Soon thereafter, however, Palembang (1277), Jambi (1281), and Samudra-Pasai (1282) sent embassies to Kūblai’s court. Kertanāgara countered with a new raid (1286) which ensured Javanese suzerainty over Jambi and most likely part of the Thai–Malay peninsula. In 1284, Kertanāgara controlled Tanjungpura, in southwestern Kalimantan, and attacked Bali that same year. The text of the *Nāgarakertagāma*, written in 1365, lists Sunda, Madura, Bali, Bakulapura (perhaps Tanjungpura), Gurun (which refers to a part of the Moluccas), Pahang, and Malayu among the “tributary countries” under King Kertanāgara’s reign^{85,86} (however, it is difficult in this type of text to disentangle mythical motifs from historical data).

⁸² Recruitment of officials through exams, conducting population censuses for a more efficient tax collection, and organization of work on dikes were among the Chinese techniques adopted. The influence of the literate class, however, remained limited (Lieberman 2003: 358–364).

⁸³ Johns and Savage-Smith 2003. The confusion of QMR with an island of Indonesia can be seen in many books from Arab authors (see below).

⁸⁴ The reunification of eastern Java had been achieved by his father, Viṣṇuvardhana (1248–1268).

⁸⁵ Songs 41 and 42, in Lombard 1990, 11: 36. See Mpu Prapañca, trans. S. Robson, 1995. At the beginning of the fourteenth century, a prince of Javanese (via his father) and Sumatranese (via his mother) descent may have formed a kingdom in Sumatra in the vicinity of the gold ores of the Minangkabau highlands (Miksic 2004a: 249). A Minangkabau kingdom sprang up in the middle of the fourteenth century, whose capital was at Pagaruyung; however, very little is known about this kingdom during the fifteenth century. It is possible that Chetti merchants of South India had settled in this region a little earlier (Wink 1997: 289).

⁸⁶ King Kertanāgara helped Tantric Buddhism spread under its *kalachakra* form, developed in Bengal around the end of the Pāla dynasty. It reached its culmination in Java, “because of syncretism with the worship of Civa Bhairava, the cult of Civa-Buddha, by applying itself particularly to the redemption of souls of the dead, found receptive ground in Indonesian ancestor worship” (Coedès 1968: 199). Moreover, the “charter of Sawardharma” edicted by the king transformed relations between political and religious powers. While it ensured priests greater freedom, religious establishments were deprived of royal financial support (Miksic 2004a: 251). Religious syncretisms were already visible at the beginning of the Singhasari kingdom, as in the temple of Candi Jao, which shows sculptures combining Hindu and Buddhist elements (thirteenth century).

Although Marco Polo left Canton and returned to Venice via Samudra (1291) without stopping in Java, he nonetheless pointed out the great wealth of Java and the degree to which Chinese merchants were involved in its trade:

This Island is also frequented by a vast amount of shipping, and by merchants who buy and sell costly goods from which they reap great profit. Indeed the treasure of this Island is so great as to be past telling. And I can assure you the Great Kaan never could get possession of this Island, on account of its great distance, and the great expense of an expedition thither. The merchants of Zayton (Quanzhou) and Mangi (southern China) draw annually great returns from this country. (Marco Polo 1980: 409)

In the eastern part of Java, Chinese cash at last replaced the ancient gold and silver coins around the end of the thirteenth century.⁸⁷ The Javanese used rice for minor transactions.

Because the king of Java had refused to send ambassadors to show submission to China,⁸⁸ and also because “Javanese trade had caused the export of large quantities of copper coins, endangering the monetary balance” of the empire,⁸⁹ Kūblai launched an expedition in 1292, aided by a Javanese prince, Raden Vijaya.⁹⁰ Raden Vijaya ultimately turned against his Chinese allies, who sailed back to China. He founded the Mojopahit Empire, which succeeded that of Singhasari. The peace treaty negotiated with the Mongols allowed a trade revival with China to take place. Already noteworthy under the Southern Song, the Chinese presence remained a milestone during the period following the birth of Mojopahit.⁹¹

Continental Southeast Asia also participated in the growth of the world-system during the thirteenth and early fourteenth centuries. While northern Burma was experiencing difficulties at this time, the Mōn kingdom of Pegu was benefiting from the contacts it had made with Southeast Asia and Sri Lanka (Buddhism was then enjoying a revival at Pegu). It was not by chance that “Pegu was developing as a maritime center at the same time as Ayuthiā,” in a situation of complementarity and rivalry (Vickery 2004: 23). It would become a major center for long-distance trade during the fifteenth century, with ports such as Bassein and Martaban.

In Indochina, the Dai Viēt ruled by the Tran dynasty (1225–1400) benefited from agricultural progress sustained by increased monsoon rainfall and by the construction of dikes and canals, and by “relying on a combination of state and local initiatives.”⁹²

⁸⁷ As early as the thirteenth century, payment of taxes and fines was made in cash. Unlike Java, Bali kept ancient currencies during the fourteenth century.

⁸⁸ In 1289, Kertanāgara had Kūblai’s envoys disfigured and sent back to China.

⁸⁹ Lombard 1990, 11: 39. Java had a reputation as a hoarder, and the Mongols may have attempted to put back into circulation the treasures accumulated. At this time, however, China practically abandoned its copper currency in favor of paper money. During the thirteenth century, the Javanese also had their own copper currency, imitating the Chinese coins of the Northern Song.

⁹⁰ Raden Vijaya was the son-in-law of Kertanāgara – who had died after the capture of Singhasari by a prince from Keḍiri.

⁹¹ Several authors, however, have described a dwindling Chinese presence during the fourteenth century. This seems to be due to internal problems within the Chinese state and to the general downward trend in trade within the world-system, rather than to Mojopahit’s power (Pearson 2003: 71).

⁹² Lieberman 2003: 358. It may be that this program of works was influenced by the Chinese example. One notes similar developments in the Canton region during the Song and Yuan periods (Lieberman 2003: 364).

Such progress gave rise to vigorous demographic growth, especially in the Red River delta. Vietnam then experienced growth in local markets, and its use of money expanded, with coins issued by the Tran, and above all Chinese copper coins. The kingdom exported gold and silver, toward both China (mostly in tributes) and Java.⁹³ The *Dai Viet su ky toan thu* mentions trade contacts with ships from Java and other Indonesian islands in the Vietnamese port of Van Don, in the Red River delta. Foreign trade occupied only a limited place in the economy of Dai Viêt (Lieberman 2003: 365). The *Zhu fanzhi* goes so far as to claim: “This kingdom [Dai Viêt] does not trade [with foreigners]” (Lieberman 2003: 365). We do know, however, that ceramics and silk were exported during the Tran period. Moreover, it was partially for mastery over trade between China and insular Southeast Asia that Dai Viêt and Champa were in constant conflict, although control over the northern territories of Champa was Dai Viêt’s main objective. At the beginning of the fourteenth century, the Vietnamese occupied new regions in the Tra Kieu area.

During the thirteenth century, Champa benefited from agricultural progress and took advantage of expanding trade between Java and China. Religious buildings were erected in order to legitimize power and integrate Champa’s territory. This region exported products from the interior (such as wood and elephant tusks), as well as rice, ceramics, and spices coming via Java or directly from the Moluccas, via the Sulu archipelago (Hal 2011: 242). But Champa was attacked by Yuan China after refusing to pay tribute (1283–1285). Commercial and political links developed with Java: a king from Champa married a Javanese princess in 1307. In 1314, following a Vietnamese attack, this king’s son fled to Java. “Cham representatives participated each year in Java’s annual Caitra festival, which celebrated the sovereignty of the late-fourteenth century Majapahit monarchy” (Hall 2011: 242).

The economic and political situation in continental Southeast Asia deteriorated relatively rapidly during the fourteenth century. This was due not only to a decrease in monsoon rainfall, which V. Lieberman sees as beginning by the late thirteenth century,⁹⁴ but also to a downturn in the international situation leading to a sharp slump in long-distance trade. As in other regions of the world-system, Burma and Indochina experienced a period of unfavorable synergies, which saw a combination of droughts, famines, social disorders, epidemics, invasions, and sluggish long-distance trade.

In Dai Viêt, the climatic deterioration accentuated demographic pressure and problems caused by internal imbalances.⁹⁵ Too much land had been appropriated by religious institutions. Moreover, the development by the elite of estates freed of taxes, and worked by serfs, led to a weakening of the state, which was then forced to augment

⁹³ Whitmore 1983: 365. Gold and silver were also carried to Angkor, via a route running across the Mekong (Whitmore 1983: 374).

⁹⁴ The Vietnamese chronicles indicate that climatic instability, marked by periods of drought, started around 1290; dryness increased until the middle of the fourteenth century. Relative aridity continued until 1392, or even 1407. This arid phase touched Burma, northern Thailand, and South China (Lieberman 2003: 370).

⁹⁵ The population of the Red River delta went from 1.2 million inhabitants in 1200 to 2.4 million in 1340 (Lieberman 2003: 368).

corvées in villages still paying taxes. The farmers then either fled or revolted, and dikes were left in a state of disrepair. From 1343 onward, revolts broke out continuously (Lieberman 2003: 368–369). The Chams took advantage of the weakness of the Dai Viêt to launch raids on the Red River,⁹⁶ while taking care at the same time to send lavish tributes to the Ming emperor, in order to secure China's support (Hall 2011: 243). During the second half of the fourteenth century, a Cham king whom the Vietnamese called Che Bong Nga invaded the Dai Viêt repeatedly: Dai Viêt's capital, Thang Long (Hanoi), was looted three times. After Che Bong Nga's death, in 1390, hostilities resumed, but the Vietnamese would maintain the upper hand throughout the fifteenth century. Between 1400 and 1403, the Vietnamese conducted four successful raids, penetrating beyond the Hai Van Pass: Champa permanently lost its northern territories, which became Vietnamized (Hall 2011: 244).

For Pagan and Angkor, as previously noted, the decline started earlier, during the 1270s and 1280s, and may have been triggered by Thai invasions. Ecological processes linked to climate change as well as internal social problems also played a role in Angkor (see above). In Burma, the degradation worsened during the second half of the fourteenth century, when the country underwent Shan invasions (1359–1368).⁹⁷

As noted above, the dislocation and transformation of inland agrarian powers permitted coastal states to develop, inasmuch as they were able to adapt to climate change and take advantage of existing long-distance trade, which remained significant even after the 1330s. Such was the case for the kingdom of Ayuthiā.

The Kingdom of Ayuthiā Emerges in Thailand (1350–)

By 1350, the “Thai” kingdom of Ayuthiā had taken root in the Gulf of Thailand as part of what Vickery views as a “historical continuum.”⁹⁸ Ayuthiā's rise to power gained from the weakening of both Angkor and the Thai principalities inland; it also took advantage of maritime long-distance trade, which was expanding at this time: Ayuthiā, with its “firmly maritime and China-oriented roots” (Baker 2003; Reid 2006: 7),⁹⁹ rapidly grew into a regional power, extending its control over the lower Menam basin and most of the Thai–Malay peninsula. “Wang Dayuan [1349] reports that Siam sent a fleet of 70 junks against Temasek [Singapore],” where the population, mostly of Chinese origin, appears to have practiced piracy (Rockhill 1915: 132); however, “a Javanese embassy to China passed by and drove off the attackers [Ayuthiā's fleet]” (Reid 2006: 20). Inscriptions “indicate that the population was Mon and Khmer, although with an increasing mixture of Thai from the North from the fifteenth and possibly even from the fourteenth century onward” (Vickery 2004: 17). The new

⁹⁶ One may wonder whether agricultural production was also declining in Champa. It may be that the Chams also attempted to compensate for declining long-distance trade with raids. They did not hesitate to appropriate part of the tributes carried by Khmer embassies to China; the Khmers bitterly complained about these abuses to the Ming authorities (Hall 2011: 385–386).

⁹⁷ Lieberman 2003: 120. These Shan invasions marked the end of Pagan as a power.

⁹⁸ “It is legitimate to think of Hsien-Ayutthaya as a historical continuum” (Vickery 2004: 17).

⁹⁹ “Thai sources credit a member of a Chinese merchant household with the founding of the Ayuthia realm in 1351” (Hall 2011: 231).

irrigation techniques brought by the Thai and the aridification affecting the interior of Southeast Asia during the fourteenth century worked to the advantage of the low-lying Chao Phraya River valley, which experienced agricultural progress and demographic growth, both underpinning a more centralized and expansionist state (Lieberman 2003: 245, 249, 253).¹⁰⁰ Toward inland areas, Ayuthiā engaged in an aggressive policy against Angkor. For Vickery, however, with the exception of the capture of Angkor in 1431, the Chinese documents “do not support the stories [from chronicles] of Thai invasions into Cambodia” in 1369 and 1389 (2004: 16). In 1387, envoys from Xian and Cambodia traveled together to China (Reid 2004). Abroad, Ayuthiā sent as many as thirty-two “tributary” missions to China between 1371 and 1398, carrying perfumed woods, aromatics, and later black pepper, to be exchanged for brocades and silks (the *Mingshi* mentions as many as forty-four articles commonly present in tributes brought from Thailand). Chinese merchants or those of mixed origin present in Thailand facilitated these contacts with China (Reid 2006: 20).

The Development of Mojopahit (Java) during the Fourteenth Century

[Java] is a place where it rains pearls, and gold and silver coins and goods of the most precious kinds.
(Waṣṣaf, early fourteenth century)

During the fourteenth century, Java took the place of Srīwijaya in the Indonesian archipelago. Trade in the “Malay” region (Sumatra and the Thai–Malay peninsula)¹⁰¹ was from then on dominated by Java and Muslim networks centered on sultanates created in northern Sumatra and later in Malacca (1401, see below). These networks were connected to Muslim merchants from China and India – Bengal, South India, and, more importantly, Gujarat. Palat and Wallerstein, however, correctly point out the crucial differences between the Indonesian Muslim states and those from India or western Asia: the Indonesian states did not use the stipend system (neither the *iqṭāʿ* of the western and Indian Muslim countries, nor the *nāyankara* system of the empire of Vijayanāgara in South India), nor did they import slaves into either the army or the administration. According to these authors, while metallic money was largely used “for long-distance trade and major transactions,” monetization was more limited in Southeast Asia than it was in India, except in merchant coastal towns;¹⁰² this point of view has been largely overturned by the data collected by Wicks for Java, at least for the fourteenth century.¹⁰³

¹⁰⁰ In parallel, as in all the new states appearing at this time, religious foundations were less active than in the Angkorian state.

¹⁰¹ Around 1350, Wang Dayuan mentions many places on the Thai–Malay peninsula: Danmaling (Tambralinga?), Xialaiwu (not precisely located), Pengkeng (Pahang), Jilandan (Kelantan), Longyaxijiao (Langkasuka), Longyamen (Singapore), Banzu (Singapore), and Dingjialu (Terengganu). About these places, see the extracts from the *Daoyi zhibi*, in Wheatley 1961: 77ff.

¹⁰² Palat and Wallerstein 1999: 24–25. The authors connect this quasi-absence of slaves in the state system to the high productivity of wet rice fields. In addition, unlike some Indian states, the states in insular Southeast Asia did not set up large armies and centralized administrations.

¹⁰³ Wicks 1992: 282 (for the eleventh century), and 292 (for the fourteenth century).

At this time, China and Java were the major powers. The kingdom of Mojopahit emerged at the end of the thirteenth century during a period of economic expansion in the world-system. For Java, the fourteenth century was a period of affluence founded upon progress in agriculture, crafts (textiles), and long-distance trade. As Sriwijaya had done previously, Mojopahit relied upon alliances with sailors from the Java Sea, and received part of port revenues. Boats have been discovered at Butuan, dated to between the twelfth and fourteenth centuries; “they belong to the lashed-lug tradition: frames were lashed to the lugs with *ijok* ties [fibers made from the bark of *Arenga pinnata* or *Arenga saccharifera*], but no *ijok* was used to fasten the planks together; only numerous, closely spaced dowels were used to do so, as in modern survivals of eastern Indonesia” (Manguin 2016: 57).

The kings of Mojopahit continued the policy conducted by earlier rulers, by digging canals and basins, and by building dikes. They undertook large developments in the vicinity of their capital. Several charters allude to significant irrigation projects involving containment of the Trilokyapuri River. These state initiatives intervened during a period of relative aridization. In parallel, a royal edict forbade any burning on hill lands (inscription at Malang, dated to 1395). In order to encourage rice cultivation, the royal administration distributed iron tools; inscriptions mention donations during ceremonies consecrating new villages. It is likely that “iron experts” held high status: this is alluded to in earlier inscriptions from the tenth century. A code dating to the Mojopahit period stipulates that “anyone who keeps rice land out of production should be considered guilty and pay a fine amounting to the quantity of rice that this land would have yielded.” The highest fine should punish those who “seek to oppose the settling of new groundbreakers” (Lombard 1990, 111: 22, 24). Rice was the main export of a kingdom that appears to have been much more centralized than its predecessors.¹⁰⁴ The state “relied on tax farms run by resident foreign and local traders” (Lieberman 2009: 796). The rulers patronized at the same time Shaivites, Vishnuites, and Buddhists. Land was granted to religious institutions, which would later acquire a great deal of power in the fifteenth century.

The decline of the Yuan dynasty after 1323 was accompanied by a weakening of Chinese trade, especially toward the Moluccas via the Sulu Sea, until around 1400.¹⁰⁵ In contrast, it is significant that the expansion of Mojopahit intervened “just as Quanzhou was dissolving into the chaos” of civil wars, from 1327 on (Ptak 1993a; Reid 2006: 18). All of the spice trade now traveled via the southern route, controlled by Java. Operating a sizeable fleet, with the collaboration of Chinese or Chinese of mixed origin and mercenaries of various origins, the Javanese also imposed their

¹⁰⁴ Except for the product of royal land and the income of agrarian taxes, rice reached the ports through market-based mechanisms. The economic and ideological significance of rice was highlighted in speeches during the yearly festival held in the Caitra month, as well as that of public works and transportation networks (Hall 1992: 220). The kings made new land grants *sima*, partially freed of taxes, to the benefit of rich families, thus gaining support of a new elite. Local temples, newly built, were part of a ritual network dominated by larger temples associated with royal rituals. At the same time, merchants and artisans were forced to pay taxes directly to the king, and no longer through the intermediary of local powers, a process the king appears to have sought to curb (Hall 1992: 223–224). The significance of the taxation of non-agrarian activities highlights the growth of these sectors.

¹⁰⁵ In contrast, Java sent embassies to China in the 1320s and in 1332 (Wolters 1970: 79).

commercial domination by force. The rulers maintained a standing army, composed of soldiers paid in gold.¹⁰⁶ According to the *Chronicle of the Kings of Pasai*, a Javanese raid was launched against Samudra by 1326, leading to this city's relocation. Described by the epic poem *Nāgarakertagāma* and the *Pararaton* chronicle (written at the beginning of the sixteenth century), its First Minister Gajah Mada, in office from 1330 to 1357, appears to have played a crucial role in Mojopahit's expansionist policy, which was marked by the control of Bali, Lombok, and other islands, and the submission of the main political Sumatran entities. The Chinese, and Chinese of mixed origin, trading between China and Southeast Asia prior to 1327, shifted their activity to Mojopahit, as well as to Temasek (Singapore), Ayuthiā, and Palembang (Reid 2006: 19). After the advent of the Ming dynasty in 1368, the Chinese sent a mission to Sanfoqi (Jambi, instead of Palembang?) in 1370.¹⁰⁷ A "Palembang" mission to China followed, accompanied by Chinese interpreters, in 1374 (Reid 2006: 23). In 1377, the ruler of the kingdom of Jambi (Malāyu) asked the Ming court to recognize its independence from Mojopahit.¹⁰⁸ Fearing an alliance of the ports of Sumatra with China, Java sent missions to China (a dozen Javanese embassies have been listed between 1370 and 1399) and asserted its presence in the Straits (as it had done a century earlier, at the start of the Yuan dynasty). In 1377, the Javanese assaulted a Chinese mission sailing to Sumatra, killing its envoys. By 1397, the Javanese also attacked Palembang,¹⁰⁹ whose ruler fled and settled on the Malay peninsula at Temasek, and later at Malacca (1401), along with Orang Laut.¹¹⁰ Recent excavations by Miksic show that during the fourteenth century Temasek was already "a substantial trade center" (Reid 2006: 20). Trade with China was one source of Temasek's wealth; the city was inhabited by Chinese or Chinese of mixed origin, whose importance in Southeast Asia Reid correctly emphasizes. The advent of the Ming and restrictions placed on foreign trade led many Muslim merchants from China to settle in Indonesia. "Java and Ayuthiā emerged in parallel, thanks to an efficient mobilization of Chinese maritime networks, which were largely Muslim and probably formed into rival groups (Reid 2006: 20–22). The competition between Mojopahit and Palembang may also have been a rivalry between sinicized merchant networks which Mojopahit had trouble controlling. "We know that a Cantonese group was taking control of Palembang at about this time" (Reid 2006: 24–25). Despite the attack perpetrated in 1377, China agreed to receive embassies from Java in 1382 and 1393.

The *Nāgarakertagāma*, written in 1365, lists 94 toponyms referring to tributaries of, or countries allied with Mojopahit, on Sumatra; on the Thai–Malay peninsula; on

¹⁰⁶ During the festival in the Caitra month at Bubat and Mojopahit, the merchant elites gave 8,000 copper coins a day to the chief army commander (Hall 1985: 247).

¹⁰⁷ Palembang and Jambi were the centers of separate kingdoms at this time (Coedès 1964a: 438).

¹⁰⁸ Before that, in Malāyu, King Adityavarman seems to have had a link with the court of Mojopahit (Coedès 1964a: 418). In the middle of the fourteenth century, as Pelliot noted (1904: 347), the capital of the princes of Srīwijaya was no longer in Palembang, but in Jambi.

¹⁰⁹ "Ming records note tersely that Srīwijaya 'was a ruined country'" (Lieberman 2009: 795).

¹¹⁰ The continuity may have been mythical, but Malacca's organization was indeed an application of the Srīwijayan model (Manguin 2000d: 168). On the Malay myths of origin, see Wolters 1970. A Chinese source indicates that "Java [at this time] had destroyed San Foqi and renamed it 'Old Harbor'" (Reid 2006: 24).

Kalimantan (Banjarmasin and other places); on the Lesser Sunda Islands; on Sulawesi; on the Moluccas; on Timor; and on Wwanin (which was probably Onin, in Irian Jaya). To the north, Mojopahit's area of influence extended as far as the southern Philippines. Control over trade networks by the Mojopahit state was entrusted to religious dignitaries. Foreign merchants flocked into the ports of eastern Java (Tuban, Gresik, and Surabaya). According to D. Lombard, "it is likely that in Mojopahit, as in Song and Ming China, long-distance trade was controlled by the state and organized for the state's benefit. This was not 'free' trade but an activity controlled by officials and which was beneficial to the public treasury" (Lombard 1990, 11: 39–40). This opinion should probably be qualified: as in China, a private sector must have played a significant role. It is true, however, that the king drew substantial revenues from trade. A Grand Chancellor (*rakryan kanurahan*) was placed in charge of foreign merchants. He was required to know "all the languages" (a translation office was probably set up, similar to the office known in China). It appears that part of the taxes levied went to the Grand Chancellor: this prefigures the character of the *syahbandar* we will later find in the sultanates. The *Nāgarakertagāma* mentions Chinese and Indian merchants, coming especially from Bengal (from Goḍa, Gaur), Karnataka, and the Pāndya country; these were regions that had become independent from the Delhi sultanate. Trade in Javanese, Chinese or Indian textiles remained significant. The fabrics featured on statues from the thirteenth and fourteenth centuries in eastern Java show patterns similar to the textile fragments preserved at Egyptian sites (Wisseman Christie 1999: 248). Cotton fabrics from Cambay were reexported to Sulawesi and further east by merchants from the cosmopolitan cities along Java's northern coast (Barnes 1998). The role played by women in these societies – a distinctive feature of Southeast Asia – was a major one: two women ruled the sultanate of Pasei (Pasai) between 1405 and 1434, and a woman is mentioned as *syahbandar* at the port of Gresik around 1500 (Ma Huan 1970: 104; Hall 1992: 190).

In the vicinity of the capital Mojopahit, the large market-city of Bubad (also a ritual capital)¹¹¹ was, like the ports, a cosmopolitan city, with sizeable Indian and Chinese sectors. Chinese texts (*Mingshi, Yingyai Shenglan* by Ma Huan) mention communities from Guangzhou or Quanzhou, which were settled during the early fifteenth century in the ports of the Pasisir (northern coast of Java). The Chinese formed much of the population at Tuban, with more than a thousand families. The same situation prevailed at Gresik and Surabaya. Gresik also housed Gujaratis, Bengalis, people from Calicut, and Muslims from western Asia. According to Ma Huan, who was a Muslim himself, "many [of these Chinese] follow the Muslim religion, doing penance and fasting" (Mills 1970: 93). Besides Sumatra, the Thai–Malay peninsula, and the Gulf of Thailand (see above), Chinese communities were also present in areas such as Indochina, Borneo, and Luzon.

While affirming its authority along the Sumatran and Malay coasts, Mojopahit attempted to develop amiable relations with the Chinese court during the fourteenth and fifteenth centuries. The Javanese kingdom dispatched at least forty-one embassies

¹¹¹ Part of the Caitra festival was held in March–April at Bubad, "soon after the wind had shifted and begun to blow from the west, bringing the international traders" (Hall 1992: 219). The initial ceremonies (with the offering of sacred water by Brahmins to the king) were held at Mojopahit (at the site of Trowulan).

between 1370 and 1465. The embassy that was sent in 1381 brought with it 300 black slaves; the 1382 embassy brought a hundred (Ferrand 1919: 6). These black slaves show Java's link to trade networks involving East Africa. Java also exported ivory, pearls, and spices to China. In exchange, China offered silks, porcelain (especially the "blue-and-white" variety), and copper coins. The sizeable inflow of Chinese ceramic ware indicates that the acquisition of luxury goods was not restricted to the elite. In order to obtain spices, Java carried rice, textiles, ceramics, and copper coins to the East. In contrast, gold and silver from China, Vietnam, or the West remained in Java. Chinese copper coins, called *picis*, became the Javanese currency during the fourteenth century – at all levels of the economy – replacing the former gold and silver coins.¹¹² Because not enough Chinese coins were imported during the Yuan and later Ming periods, Java issued coins copying the Chinese coins, bearing the same names, but of lighter weight; these were soon imitated by towns trading with Java.¹¹³ During the sixteenth century, the *Boxer Codex* (1590) thus indicates that after 1450, in order to compensate for the drain on his silver currency (*batguin*), the king of Brunei issued tin or lead coins called *pitis* (from the Javanese *picis*).¹¹⁴ These *picis* were used – especially in Java – to buy spices from the Moluccas and Banda.

During this time, between the tenth and fourteenth centuries, Javanese states appeared to be better able to take advantage of the impetus given by the flourishing trade in the China Sea and the Indian Ocean; these states, which were located near the Spice Islands, and used routes which they were able to control, were also able to develop their agriculture; they therefore had abundant labor forces which could be used for industrial production that was partially destined for export. Mojopahit seemed to be well placed to benefit from the global trade revival at the beginning of the fifteenth century. However, the rising power of the Muslim networks, the founding of Malacca in 1401, and the irruption of ships of the Ming fleet from 1405 on – all this upset the balance of power in Southeast Asia.

While Islam was progressing everywhere, its development took various forms. On the far side of the Indian Ocean, the unity of the Muslim Empire was now a mere memory. Various cleavages persisted, between Shiite and Sunni communities, and also between western Asia and Egypt, the Persian Gulf and the Red Sea; this maritime corridor dominated trade links in the western Indian Ocean.

¹¹² A process initiated at the end of the thirteenth century (see above). See Wicks 1992: 291, 297. The ancient system based on *māsa* coins is no longer mentioned after 1296. Revenues, fines, and taxes, after 1350, were evaluated in Chinese money: Chinese coins were used not only as means of exchange, but also as a measure of value. See also van Aelst 1995: 367. According to van Aelst, the use of Chinese coins goes back at least to the thirteenth century (1995: 368). These coins mainly date to the Northern Song period (1995: 376). They were primarily copied.

¹¹³ According to van Aelst (1995: 379), the first copies were made of bronze, around 1300 at the latest; they were later made of lead or tin, the quantity of copper diminishing in the coins (the Song coins themselves were made of an alloy of copper [65 percent] and lead, with some tin). Tin and lead used by Java were imported from the Thai–Malay peninsula, and copper came from China (Chinese coins were probably melted).

¹¹⁴ Wicks 1992: 299. In "the lower strata of a site in Brunei," "after 1380" (?), not only Chinese coins, but also lighter Javanese copies were found (van Aelst 1995: 370). The oldest layers at Brunei should in fact be dated to an earlier period (see above).

10 Central and Western Asia: From the Seljuk Empire to the Ilkhanids

The two brothers [Jamāl al-Dīn Ibrāhīm al-Tībī, on Qays, and Taqī al-Dīn al-Tībī, in the Pandya kingdom of South India] thus controlled the trade of India and the seas of eastern Asia on which “the prosperity of the islands of the Persian Gulf in particular, and that of the other countries in general depended, from Iraq and Khorasan to Rūm and the land of the Franks.”
(Waṣṣāf, in Aigle 2005: 143)

The men of these kingdoms [of Persia] lead the horses to Chisci and Curmos [Qays and Hormuz]; . . . and find there merchants who buy them and carry them by sea to India, and there they sell them at a high price.
(Marco Polo 1980, 1: 95)

The merchants make the world prosperous.
(Tamerlane, in a letter to the king of France, July 30, 1402)

From the Seljuk Empire to the Crusader Aggression

The tenth century had been a century of violence in western Asia. The picture during the first half of the eleventh century was no brighter. A series of riots and revolts affected Baghdad.¹ Iran suffered from famines, which had both social and climatic causes. The Muslim world was then experiencing a labor crisis due to the short supply of slaves: the Slavs, who were Christians, “were no longer sold to the Muslims, and the Turks, who had converted to Islam, could no longer be forced into servitude” (Lombard 1971: 221). In 1055, the Buyids (Shiites who ruled western Asia) were overthrown by the Seljuk Turks (Oghuz Turks), Muslims of the Sunni faith who were former officers serving the Ghaznavids. The Seljukids constituted a dynasty, supported by the Abbasid caliphs, and formed various branches.² The offering of power by the caliphs to the Seljuks was the result of the disintegration of the Muslim Empire at that time. We cannot agree with Pirenne, who states that Seljuk rule “was the death blow to Muslim civilization” (Brown 2001: 193). After unifying the Persian provinces (1040), the Seljuk Tughril established himself as “sultan” in 1055 (Tughril was the first to bear this title). He took Syria from the Fatimids, seized Jerusalem (1070), and won a resounding victory over Byzantium at Manzikert, which allowed him to push the border of the empire closer to that city (1071).

¹ Violence was reported in 1002, 1007, 1015–1016, 1045, 1051, 1055, and 1072.

² The Seljuks entered the Ghaznavid territory as refugees; they finally took control of Khorasan in 1040. The movement of Turkish tribes westward, around 1000 CE, probably resulted from competition for land and control over trade in the regions further east. From this period onward, the Persian language spread throughout the “Turco-Iranian” world (Grévin 2009: 659).

His successor, the sultan Malik Shāh (1072–1092), controlled a territory stretching from the Mediterranean to Samarkand. The Seljuk capitals were Isfahan in the west and Merv in the east. Samarkand, “where [merchants] gather from all regions of the world,” writes the Spanish Jew Benjamin of Tudela, remained prosperous during the twelfth century. The Jews were active in trade (however, the figure of 50,000 Jews at Samarkand given by Benjamin of Tudela, who did not travel to Central Asia, has little credibility). Ghazni too was home to a sizeable Jewish community.

The period of Malik Shāh was marked by the personality and work of a vizier of Khurasan origin, Nizām al-Mulk, who attempted to restore the former Iranian political institutions throughout the empire, here imitating the Ghaznavids, and to set up an efficient centralized administration. In a significant episode revealing the integration of the Seljukid Empire, Malik Shāh once paid a boatman on the Oxus with a check drawn on a bank in Antioch (Adshead 1995: 135). In the Seljukid system of government, which would later be copied by the Egyptian Mamluks, the sultan was supported by a Persian bureaucracy under the moral control of religious leaders, and a Turkish or multinational military class ruled by *ghulām* slaves, “some of them benefiting from (*iqṭāʾ*) fiefs.”³ The funding of madrasas and teachers by the emirs permitted the “instrumental use of religion as the ideology of maintenance of social order” (Bianquis 2000: 19). Under Seljuk rule, “a collusion of interest between urban merchants, men of religion and professional soldiers” fostered a revival in trade and a new growth of cities (Bianquis 2000: 77). According to the Arab author al-Ḥarīrī (1054–1122), one merchant declared: “I want to send Persian saffron to China, where it fetches a high price, according to what I have heard, then I will send Chinese porcelain to Greece, Greek brocade to India, Indian iron to Aleppo, glass from Aleppo to Yemen and Yemeni striped fabrics to Persia.”⁴

In 1092, however, the sultan Malik Shāh died and Nizām al-Mulk was assassinated. The Seljukid Empire disintegrated, first in the west, then in the east, following the arrival of Turkmen groups, and, more importantly, unrest fomented by Shiites (Ismaelites in the north, and Qarmatians in the south, who pillaged Baṣra in 1090). The Seljukids’ problems were also due to internal contradictions: opposition – sometimes violent – between the sultan and the caliph; increasing fragmentation due to the powers of the emirs, paid by the *iqṭāʾ* system,⁵ and the atabeg dignitaries who played on the rivalries between Seljukid princes.⁶ Sanjar (1097–1157), who ruled the eastern territories of the empire, was the last of the great sultans; he maintained a certain degree of power, whereas the western part of the empire was divided among various atabegs. In 1141, however, Sanjar was defeated by an army of the Qarakhitay khānate near Samarkand; this khānate had been founded in Central Asia in 1137 by a Khitan royal branch. Sanjar was later beaten by a revolt of Oghuz Turks, who took him

³ Garcin 1995a: 145; Calmard 1995: 330.

⁴ J. M. Hobson, www.muslimheritage.com/article/islams-contribution-commerce

⁵ Note that the *iqṭāʾ*, a system created during the tenth century, was a non-hereditary privilege granted to a war chief for the collection of taxes in a specified area. The *iqṭāʾ* progressively became hereditary during the eleventh and twelfth centuries. There were in fact several kinds of *iqṭāʾ*. Merchants who had lent money to the state or to local lords sometimes received land as repayment (*iqṭāʾ al-tujjar*).

⁶ Garcin 1995a: 136ff. In the Seljuk system, “the justice of the sultan, who was responsible before God, was the foundation upon which the state was built” (Garcin 1995a: 135): there was no place for the caliph here.

prisoner in 1153. The value placed on the army and military commanders, combined with insecurity, and taxes imposed on the peasantry led to a decrease in agricultural production (the irrigation systems were no longer properly maintained). Manufacturing activity and trade also declined at this time. Textile production, however, made some progress during the tenth and eleventh centuries in Iran, in parallel with cotton cultivation, and some Persian merchants were able to amass huge fortunes: Istakhri (tenth century) thus mentions one merchant who accumulated 4 million dinars, an amount “equivalent to the revenue of the entire province of Fars over a period of eighteen months” (Bausani 1971: 87). The beginning of the second millennium also saw growth in the manufacture of ceramics (at Kāshān and Rayy, for example). The practice of pious endowments of land (*waqf*) developed: their income was intended for the maintenance of mosques, schools, hospitals, and caravanserais.⁷ This practice allowed those lands to evade the *iqṭāʿ*, but was also responsible for the relative economic stagnation of the system (Hodgson 1975: 51). The decline of the agricultural sector became obvious from the eleventh century onward; small peasants were forced to seek the “protection” of large landowners, by paying an annual levy of one-quarter of the harvest. Besides the damage done by internal disturbances and invasions, Watson has put forward increases in taxation, the growing immobilization of land in *waqf* domains granted to religious institutions, and most of all, the very principle of the *iqṭāʿ*, which discouraged agricultural intensification and favored short-term production, as major causes of the decline (Watson 1983: 143). However, in the eleventh century and more so in the twelfth, the *iqṭāʿ* tended to become a “feudal” inheritance, more favorable to agricultural progress (Bausani 1971: 89). Moreover, as highlighted above, there was the problem of silting, which led to higher ground levels that prevented normal irrigation.

The power of the Seljukids crumbled at the end of the eleventh century within a climate of unrest and insecurity. The Seljukids, however, retained nominal power in Iraq until 1194. During that year, Tughril III was killed in a battle against the army of Khwārezm, a Turkish power that emerged in the Lower Oxus region, expelling the Ghurids from Khorasan in 1186. In western Iran, a group of Turkish origin, the Salghurids, took control of Fars in 1148, and ruled that region until 1268. While recognizing Seljuk suzerainty, they allowed Shiraz to enjoy a new period of prosperity. The caliph al Nāsir (1180–1225) tried to reconstitute the unity of Islam and restore a powerful caliphate by choosing Shiites among his collaborators at Baghdad (duodecimal Shiism was then expanding in western Asia) (Garcin 1995a: 146). The attempt was only partially successful, and the power of his successors weakened once again. Baghdad, however, remained a sizeable city. It was also the center of Jewish influence: the Exilarch, chief of the Jewish diaspora, lived there, and “several ministers of the caliph were Jews” during the twelfth century (Harboun 1986: 63).

In Anatolia, moreover, Seljuks founded the Sultanate of Rūm, which chose Konya as its capital in 1097. During the twelfth century, this state, “a distant precursor of the Ottoman Sultanate” (Wink 1997: 10), extended over almost all of Anatolia and became prosperous through the trade it fostered between the Orient and the Occident.

⁷ From the Persian *kāraṭan-sarāy*, “palace of the caravan” (Bausani 1971: 91).

The Sultanate of Rūm took the port of Antalya in 1207, but after the assassination of Sultan Kaykubad I in 1237, the country was in crisis; it became a Mongol protectorate following a military defeat in 1243, and finally disappeared in 1307.

Unrest across western Asia and southern Persia during the tenth, eleventh, and twelfth centuries led to a relative shift of trade networks toward South Arabia and the Red Sea. It had been thought that neither the Buyids nor the Seljukids had the means to implement a powerful maritime policy; the ports of Baṣra and Sīrāf (destroyed by an earthquake in 977) were in severe decline. However, we note the sending of an Oghuz chief against the Qarmatians of Bahrain in 1077, the creation of the port of Sharma by Sirafi merchants in South Arabia, and the existence of relations with the East African coast. The idea of a decline of the Gulf and its region should therefore be strongly qualified. Nāṣir-i Khusrau observed that in the capital of Isfahan, in the middle of the eleventh century, “no fewer than two hundred bankers were in business.” “These Oriental bankers . . . performed all banking operations: the exchange of money, loans, and the sale of assignments of credit” (Ashtor 1972: 561).⁸ The Red Sea and Egypt were eminent in trade; however, it is certainly incorrect to think, as has been written, that the Persian Gulf had lost all importance. While Sīrāf no longer played a major role after the tenth century (the entire Fars province, affected by internal turmoil, was by then in decline), Sirafi merchants moved to other places. Ibn al-Mujāwir wrote: “The people from Sīrāf moved to all the shores of the sea” (1951: 43, quoted by Vallet 2015: 472). Qays [Kish]⁹ and Hormuz rose to prominence from the eleventh century onward (see Aubin 1963) and Iranian networks extended as far as the Red Sea. Ibn al-Mujāwir thus describes the creation of the town of al-Ahwāb by the great Sīrāfi merchant Rāmisht, “when he arrived there from India to go to Mecca for the pilgrimage” (Ibn al-Mujāwir 1951: 246; Vallet 2015: 472).¹⁰ As Rougeulle notes (2015: 149), the development of Sharma in Phase 4 (second half of the eleventh and early twelfth century) appears to be linked to “the rise of the ports of Hormuz and al-Tiz [Makrān coast], controlled by the Seljukids from Kirman.” Visiting Kish in 1170, Benjamin of Tudela found it “a considerable market, being the place to which the Indian merchants and those of the islands bring their commodities” (Chakravarti 2012: 79).

People from Sinear, Yemen, Persia come there to trade all sorts of silk, purple cloth and flax, cotton, hemp, worked wool, wheat, barley, and all sorts of food, and lentils of every description, and they trade with one another, whilst the men from India bring great quantities of spices thither. The islanders act as middlemen, and earn their livelihood thereby. There are about 500 Jews [on this island]. (Harboun 1986: 126)

⁸ A. L. Udovitch, however, points out: “There is no indication that the *suftaja* were transferable or negotiable” (1975: 17, 1979: 269).

⁹ The decline of Sīrāf was due not only to the earthquake of 977, but also to the rise of Qays. Qays’s power grew after the defeat of the Seljuks by the Khwārezm Shāhs. The exodus of merchants and artisans from the Persian Gulf to Egypt during the eleventh century, as noted by Ashtor, cannot be overstated. The main Qays port on the continent was Qal’at ‘Abd al-Rahman (Rougeulle 1996: 164, 169). Under the Ilkhāns, Qays was practically autonomous (Aigle 2005).

¹⁰ According to al-Mujāwir, Sīrāfis were also involved in the creation of Ghulāfiqa, the main port of Zabīd (Vallet 2015: 472).

In practice, a balance was restored between the Persian Gulf and the Red Sea. At the end of the tenth century, Al-Muqaddasī pointed out the significance of the Persians both as sailors and in shipbuilding (Persians were present in the Red Sea, and dominated Jeddah). Ceramics (various types of sgraffiato) imported on the East African coast during the eleventh and thirteenth centuries still came primarily from the Persian Gulf. In the middle of the eleventh century, the princes of Bahrain owned 30,000 Zanj and “Abyssinian” slaves, employed primarily in agriculture.¹¹ In 1135, the ruler of Qays sent a naval expedition which – unsuccessfully – attempted to seize Aden and take control of the East African trade, in particular the slave trade (Goitein 1954b; see below). However, during the eleventh and twelfth centuries, one notes a fundamental change in trade in the Persian Gulf. Previously based on the activity of private merchants, the networks were now partly controlled by local power barons, which does not seem to have been the case in the Red Sea, either under the Fāṭimids, or in the ensuing periods: trade remained in the hands of private traders, at least until 1425 (Rougeulle 1996: 175). Yāqūt thus indicates that the ruler of Qays controlled the sea and Oman. The decline and subsequent abandonment of Sharma (Hadramawt) may have been linked to the aggressive policy of Qays, and also to the rise of the cities of Shihr and Mirbāt (to the east of Sharma, in Oman), where a lineage of Persian origin was established (Rougeulle 2015: 149).¹² Another cause of the abandonment may have been an Ayūbbid intervention, conducted from Aden: rare Egyptian vessels have been recovered at the site at the end of its occupation (Rougeulle 2015: 176; see below). “At the beginning of the thirteenth century, the *khutba* was preached in the name of the ruler of Qays at Kanbāya [Cambay], Sūmnāt [Sōmanāt] and Badrīsar” (Vallet 2010b: 583, quoting Ibn al-Mujāwir). Chinese ceramics continued to be imported in the Gulf. “Al-Bīrūnī saw no less than thirteen different kinds of Chinese wares in the house of a merchant from Iṣfāhan who lived in Rayy” (Carswell 1998: 672).¹³ The Qal’at al-Bahrain site has yielded various Chinese ceramics dated to the thirteenth century: *qingbai* porcelain, and, most of all, Longquan celadons.

Several types of ships appear to have been in use. A graffito found at Sīrāf and dated to the tenth–eleventh century, featuring a three-masted vessel, shows the large size of the ships, which could reach capacities of several hundred tons, in the Gulf and the Indian Sea (Whitehouse 2001: 412). The fleet sent by the ruler of Qays to Aden in 1135 included “two large burmas, three shaffaras [of smaller size] and ten [smaller] jashujiyas.”¹⁴

The period between the late eleventh and late thirteenth centuries was marked by fighting between Crusaders and Muslims for the control of Palestine, until the fall of Acre in 1291 to the Mamluk rulers of Egypt. Trade relations, however, developed between Italian cities (notably Pisa, Venice, and Genoa) and the Muslim world

¹¹ Nāṣir-i Khusrau 1986: 87, quoted by Sheriff 2005: 19.

¹² Some letters from Jewish merchants found in the Geniza show the new importance of Mirbāt (Goitein and Friedman 2007: 205–206, 295).

¹³ It was not only the beauty of the Chinese ceramics that attracted merchants and buyers. During the thirteenth century, al-Ṭūsi mentions the popular belief according to which one is able to detect “poison which would have been put into a porcelain vessel.”

¹⁴ Chakravarti 2002a: 46, quoting a letter from the Cairo Geniza (see Goitein 1954b: 256). Ibn Jubayr, at the end of the twelfth century, refers to a type of ship called *jilaba* sailing in the Red Sea (see below). The Arab sources give the name *marākib* (sing. *markab*) to seagoing ships.

(Egypt, Syria, and the sultanate of Rūm, which allowed trade with Iran).¹⁵ Note that the First Crusade took place in 1096–1099, pretexting the abuses suffered by the pilgrims.¹⁶ It led to the creation of the Christian kingdom of Jerusalem. The Second Crusade (1147–1149) was launched following the capture of Edessa by the atabeg of Mosul, Zengi, in 1144. Zengi died in 1146, but his son, Nūr al-Dīn, the atabeg from Aleppo, carried on the fighting. He took various Frankish towns, and occupied Egypt in 1169. Then he appointed his nephew Ṣalāḥ al-Dīn ibn Ayyūb (Saladin) as vizier of the Fatimid caliph of Cairo. In 1171, Saladin ousted the caliph, and was recognized as sultan in 1176, under the nominal suzerainty of the Abbasid caliph, thus founding the Ayyūbid dynasty, and re-establishing Sunni power. Saladin reunited Egypt, Syria, part of Iraq, and Arabia. Then he took Jerusalem in 1187, but was forced to sign a treaty with the Franks following the Third Crusade (1192). Jerusalem remained a Muslim territory, but was open to Christian pilgrims. The city would again be open to the Christians from 1229 to 1244, following the Sixth Crusade and the treaty of Jaffa,¹⁷ but was strictly controlled by the Muslims from 1244 onward. When the sultan of Egypt destroyed a Frankish army, the Eighth Crusade was launched (1248–1249), but its army was defeated at Mansura. The climate in Palestine between 900 and 1300 was wetter than in the centuries before and after (Brown 2001) (according to Sorrel *et al.* [2007], rainfall increased after 1150).

Despite the unfavorable political context during this period, Arab science probably remained at a more advanced level than in other regions of the world. The teaching of “foreign sciences” (primarily ancient Greek philosophy and science) was banned in the main madrasas (state universities created by the Seljukids); however, a tradition of research continued in private teaching establishments, often led by scholars who also held religious functions.¹⁸ Supported by the state, hospitals were sometimes centers of teaching and research. Philosophers and scholars worked as physicians in some courts: these included Ibn Sinā (Avicenna, 980–1037) in Iran, and the Jewish philosopher Maimonides (1135–1204) in Egypt, who notably worked at Saladin’s court there. Significant progress was being made especially in mathematics¹⁹ and astronomy, in western Asia, as well as in Egypt, the Maghreb, and Spain. However, various authors have pointed out the practical inclinations of Islamic mathematics, which did not

¹⁵ See the testimony by Ibn Jubayr (1183–1184), in Chaudhuri 1991: 435. After the capture of Acre by the Muslims, the Venetians, who previously controlled that city, relied on networks via Egypt. They also established relations with the Seljuks of Rūm, who granted privileges to Christian merchants during the thirteenth century.

¹⁶ The Holy Sepulchre had been partially destroyed by the Fatimid caliph al-Hakim in 1009. Following a peace treaty between the Byzantine emperor Argyropoulos and al-Hakim’s successor, reconstruction work was carried out.

¹⁷ Emperor Frederick II, who spoke Arabic (along with several other languages), maintained good relations with the Muslim world; he gained Christian access to Jerusalem practically without fighting. The Sixth Crusade was the only pacific Crusade ever launched.

¹⁸ Libraries in the madrasas, however, contained books dealing with “ancient sciences.” In Damascus, in addition, during the late twelfth and thirteenth centuries, three madrasas specialized in medical studies (Huff 1993: 73).

¹⁹ Mathematicians developed algebra, trigonometry, and combinatorial analysis, for example Ibn Mu’nim (Marrakech, died c. 1228) and the Persian ‘Umar Khayyām (c. 1050–1123), who was a mathematician, astronomer, and poet, and a disciple of Avicenna. Sultan Malik Shāh asked ‘Umar Khayyām to reform the calendar.

concern itself with the theoretical geometry of the ancient Greeks. Connections via the terrestrial and maritime Silk Roads permitted the introduction of Chinese techniques into the Muslim world; production of steel using the Chinese process of “co-fusion” was known by the eleventh century (Needham 1974).

The spread of knowledge (primarily religious knowledge) was bolstered by the intensive production of paper from the tenth century onward, relying on the use of hydraulic power. This explains the creation of hundreds of libraries, public and private. The library of the Fatimid palace in Cairo contained forty rooms and 18,000 manuscripts dealing with the “ancient sciences.” Córdoba housed seventy libraries, one of them containing 400,000 volumes (Huff 1993: 73, 74).²⁰

Famous philosophers such as Avicenna (mentioned above) and Averroes (1126–1198), who became qadi at Seville and later Córdoba, had a strong impact on western thought. Averroes, who was interested in the materialistic and rationalist aspects of Aristotle’s thought, developed the doctrine of “double truth,”²¹ of reason and revelation, between which there may be distinctions and even oppositions. His philosophy was taught at the University of Paris. In the technical field, the *Book of Knowledge of Ingenious Mechanical Devices* by Al-Jazarī (1206), a treatise written for engineers and artisans, represented the summit of mechanical engineering at this time. It described fifty devices, hydraulic machines, clocks, and automatons, showing many innovations in the use of gear systems (for example, for the mechanization of the shaduf, or in *clepsydrae*) and the use of a crank and connecting-rod system (in another example of mechanization of the shaduf, and in a pressure and suction pump “offering a cost-efficient alternative to the noria”) (Jacomy 1990: 134–136).²²

The confrontation between the Christian and Muslim powers in Palestine did not prevent trade from developing between these two worlds. Italian merchants, especially the Venetians, took an active part in this trade, in the Black Sea (following the capture of Byzantium by the Fourth Crusade in 1204), in western Asia and – more importantly – in Egypt. In 1215, nearly 3,000 Italian merchants were living in Alexandria. From 1261 onward, Genoa, which helped the Greeks to re-take Byzantium, competed with Venice in the eastern Mediterranean and the Black Sea, where the Ligurian city created outposts at Pera (Byzantium) and Caffa. The movements of merchants via the steppe routes and throughout the Muslim world triggered various transfers of knowledge (see above, Introduction to Part II). J. Gernet, who correctly points out that Europe lagged considerably behind China at this time, mentions “paper, compass and sternpost rudder,”²³

²⁰ A tenth-century library at Shiraz contained around 360 rooms. One Egyptian madrasa in the thirteenth century owned 100,000 volumes, and the Marāgha observatory had 400,000 volumes. The University of Paris owned only 2,000 volumes by the fourteenth century.

²¹ In “On the Harmony of Religion and Philosophy.” Huff 1993: 82.

²² Al-Jazarī was an engineer and technician in the service of the Artuqids, who ruled part of Anatolia, under the suzerainty of the Zangids from Mosul. Al-Jazarī’s work was developed from a set of knowledge present in Mesopotamia. Al-Jazarī’s third device, using a crank-connecting rod system, reveals improvements to the *saqiya*, with hydraulic power replacing animal power. Al-Jazarī’s work probably informed Francesco di Giorgio Martini’s proposed “water turbine” during the fifteenth century (Jacomy 1990: 200).

²³ Concerning the compass and the central rudder on ships, various authors have suggested a transfer of knowledge via a northern route (see above).

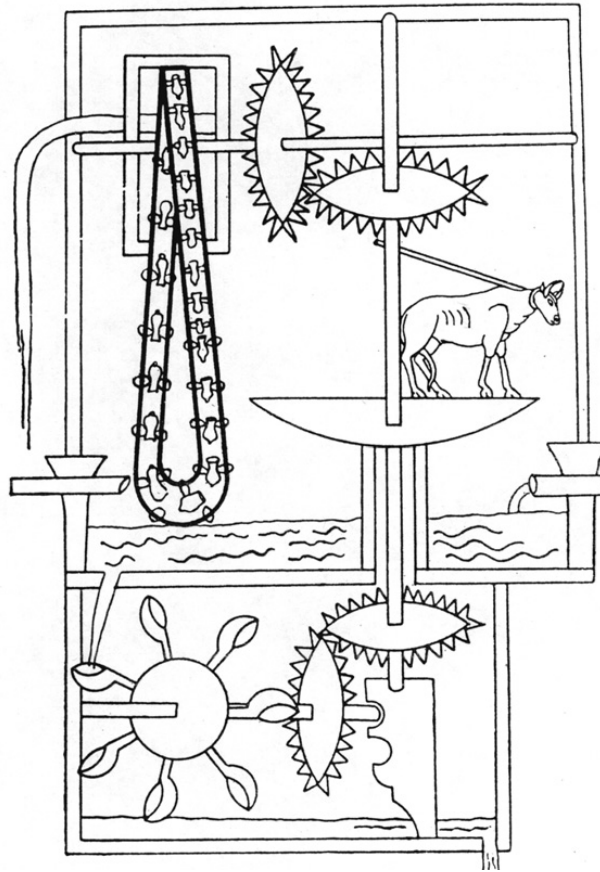


Figure 10.1 Al-Jazari's third water-raising device. A chain of buckets (*saqiya*) is driven by a waterwheel. The ox on the rotating circular disc is an illusion. Drawing from Needham *et al.* 1965: 353. With the permission of Cambridge University Press

A device built on this principle existed on the Yazid River near Damascus during the thirteenth century (see drawing in al-Hassan and Hill 1991: 46–47).

during the late twelfth century, and the application of the water mill to looms, the counterweight trap, then the wheelbarrow in the early thirteenth century” as among eastern Asia’s contributions to medieval Europe. A winding machine of Chinese inspiration was introduced into Italy during the late eleventh century (see above). Alcoholic distillation, which appeared in Italy during the twelfth century, was borrowed from the Muslim world.

The Shock of the Mongol Invasion

At the beginning of the thirteenth century, the region of Khwarezm (Khorezm) appeared as the new dominant power in western Asia: its ruler ‘Alā’ ad-Dīn Muhammad (1199–1220) extended his conquests into Iran, seized Bukhara and Samarkand, and entered Ghazni in 1215. In 1219, he gathered an army in order to attack Baghdad. The emergence of the Mongol power, however, was to change Khwarezm’s destiny. The killing of Mongol emissaries during the attack on a caravan coming from Mongolia and the refusal by Khwarezm to pay the compensation requested by the Mongols would lead to devastating reprisals (see below).

The building of a vast Mongol empire at the beginning of the thirteenth century marked a crucial period of turmoil within a context of global economic expansion. Climatic changes may have played a role in the incipient Mongol movement. After

a long favorable period marked by strong demographic growth and ever-increasing herds of livestock, global cooling around 1200, accompanied by a process of aridification in northern China and part of Central Asia, may have led the Mongols to look southward for new territories.²⁴ However, there were certainly economic, political, and ideological reasons that also triggered the Mongol wave. A. Bosworth (1995: 220) sees the epic history of Genghis Khān and his successors as a Mongol response to the increasing pre-eminence of the maritime routes (it is true that “an average dhow could carry the equivalent of a thousand camel loads, and could travel the same distance as a camel caravan in one third of the time” [Wink 2004: 96]²⁵). The systematic organization of the army, divided into decimal units, and the idea of universal sovereignty were both responsible for the stupendous advance of the Mongol armies. Their sudden appearance in the west would profoundly affect the Muslim world of Central Asia and western Asia.²⁶ As early as 1211, the Mongols put an end to the independence of the Qarakhitay khānate founded in Central Asia. The first massive attacks occurred between 1219 and 1221: the armies of Genghis Khān destroyed the cities of Khwarezm and laid waste to the Khorasan. Bukhara, Samarkand, and Merv were seized, as well as Balkh, Herat, and Nishāpūr. An attack was launched on Persia in 1224. The Mongol armies took Azerbaidjan, Greater Armenia, Georgia, and the territory of the Seljukids of Rūm. The Kurdish historian Ibn al-Athīr (1160–1233) emphasized the unprecedented scale of the massacres perpetrated (Wink 1997: 15). In 1227, Genghis Khān died following a campaign against the Xixia Empire, but his successor, Ögödei, continued the Mongol expansion, seizing northern China (1234),²⁷ Persia, Russia (1240), and Hungary (1241). His death (1241) halted the Mongol advance into Europe.

Yelü Chucai, an advisor to Genghis Khan of Khitan origin, is credited with the famous saying (directed to Genghis Khan’s successor, Ögedei, whose Secretary of State Yelü Chucai would become): “Empires may be conquered on horseback, but they cannot be ruled on horseback.” To govern their empire, the Mongols called on the

²⁴ Brown 2001: 216; Austin *et al.* 2007: 391. Climatic cooling affected the globe during part of the thirteenth century (Zhang *et al.* 2007: fig. 2; see above, Introduction to Part 11). This cooling phase induced increased aridity both in northern and western China (Tan *et al.* 2003). Northern China remained arid until the middle of the thirteenth century. According to Austin *et al.* (2007), arid conditions were prevalent from 1195 to 1355 in the regions of the Aral Sea, the Tianshan mountains, and Lake Issyk Kul. S. Giralt *et al.* (2004) have revealed a decline in the level of Lake Issyk Kul from 1180 onward, with a minimum reached during the early fourteenth century. Increased rainfall, however, is noticeable in the steppes at the beginning of the fourteenth century, prior to the outbreak of plague epidemics (see below). R. D’Arrigo *et al.* (2006) point to cooler conditions *c.* 1200. As previously noted, N. A. Bokovenko (2004), in contrast, argues that the cooling phase in the steppes was usually accompanied by increased rainfall; however, it is likely that only part of the steppes was affected by this process.

²⁵ In addition, “one crew member was needed for several tons of cargo, as compared with two or more men for each ton in a camel caravan” (Wink 2004: 9).

²⁶ The organization into decimal units had already been mentioned by the *Shiji* for the Xiongnu Empire. The Mongol weaponry probably benefited from advances in metallurgy, with steel production developing in Central Asia between the tenth and twelfth centuries.

²⁷ As R. Palat notes (2015: 71), the Mongols “eliminated all the non-Chinese dynasties ruling” at the Chinese borders: the Tangut Xixia (1227), the Jürchen Jin (1234), and the Tibeto-Burman kingdom of Dali in Yunnan (1254).

services of literate people from northern China such as Yelü Chucai, and, more importantly, Muslim administrators, especially those hailing from Khwarezm and Khorasan. Genghis Khan also brought craftsmen: according to Juvainī, one of the historiographers of the Mongols, who originally came from Khorasan, 30,000 artisans were deported to Mongolia from Samarkand after the conquest of that city (Liu 2010: 104). Among the trade “partners” (*ortaq*) of the Mongols, after 1221, there were also large numbers of Muslims from Khwarezm and Khorasan, who ensured that Karakorum was supplied with luxury goods, particularly silk brocades embroidered with gold thread (*nasij*) produced in Iran and Transoxiana.²⁸ For the manufacture of these silk fabrics, Ögedei settled Muslim weavers originating from these regions near Urumqi (in Xinjiang), then at Xunmalin (at the border between Shanxi and Hebei), and Hongzhou (Shanxi) (Liu 2010: 121).

The building of a Mongol Empire went hand in hand with the setting up of new exchange networks. As early as 1229, the Mongols developed a route across the steppes running from Mongolia to the lower Volga basin, using the Chinese institution of post stations. Along this transcontinental route more than 10,000 stations were built, keeping 300,000 horses. Travelers received *paizi*, bearing inscriptions in Uighur script guaranteeing the bearer the Mongol emperor’s protection. This was the route followed by two Franciscans, the Italian Giovanni dal Piano dei Carpini and the Flemish William of Rubruck, in 1247 and 1253: they were sent by Pope Innocent IV and the French king Louis IX to the Mongol capital of Karakorum to meet the Great Khāns Güyük and later Möngke, to solicit an alliance of the Mongols against the Muslims.²⁹ This alliance would never be achieved, and the Mongol ruler of the Golden Horde, Berke (1255–1265), later converted to Islam.

From 1241 to 1251, internal discord in the Mongol khānates brought some respite to the countries of western Asia, but the designation of the Great Khān Mangū (Möngke) in 1251 marked a new phase in the Mongol advance. Möngke’s brother, Hülāgū, entered Iran in 1256 at the head of a large army and destroyed the Ismaili fortresses. The Mongol army, which employed Chinese engineers, used explosive devices launched by trebuchets.³⁰ The invasion of Iraq was facilitated by the weakness of the Abbasid state. In 1258, Hülāgū seized Baghdad and put to death the caliph al-Musta’sim.³¹ In a letter to the French king Louis IX, he claimed that his forces had annihilated 200,000 Baghdadis. However, the Mongol expansion was halted in 1260 by a defeat suffered against the army of the Egyptian Mamluks at ‘Ayn Jālūt, and again by the war waged by the northern khānate of the Golden Horde against Hülāgū in 1262: Hülāgū was defeated on the shores of the Terek River. The Golden Horde

²⁸ In contrast, the role of the Jews seems to have declined in the networks of Central Asia from the thirteenth century onward, at a time when they disappeared in long-distance trade between Egypt and India (see Wink 1990: 94ff.).

²⁹ The Nestorians appear to have enjoyed a privileged position under Möngke’s reign. William of Rubruck mentions the presence at Karakorum of “a vast multitude of Hungarians, Alans, Ruthenians, Russians, Georgians, and Armenians” (Adshead 1995: 144). Alans in particular were employed in the Mongol and later the Yuan army.

³⁰ The Muslims later used this technique and improved it. Engineers from Iran and Iraq accompanied the Mongol army that attacked China in the 1270s (Pacey 1990: 46).

³¹ Al-Musta’sim, rolled in a carpet, was trampled by the horses of the Mongols.

controlled the routes between Central Asia and Russia during the thirteenth and fourteenth centuries. The Mongols of Hülāgū remained in Iran, where their rulers, who also reigned over the Caucasus, Anatolia, and Iraq, would bear the title of Ilkhān.

The Ilkhāns of Iran: The Flourishing of the Eastern Persian Gulf

The Ilkhāns set up their first capitals at Marāgha and Tabriz. When Hülāgū died, his son Abaqa inherited power (1265–1282) and managed to consolidate the Ilkhānid territory both internally and externally, defeating an army of the khānate of Djaghatai at Herat in 1270. However, he was severely defeated twice in Syria by Egyptian armies. Like his successors Arghūn (1284–1291) and Gaykhatu (1291–1295), he sought to forge an alliance with the Christians (the Franks of Palestine, the Byzantine emperor, and even the king of England) to break up the Egyptian monopoly on trade between the Indian Ocean and the Mediterranean. For various reasons, these plans for alliance never led to anything concrete.³² European merchants, at any rate, enjoyed freedom of movement in the Ilkhānid territory. In 1290, Arghūn hired Genoese carpenters and sailors in order to build ships, in preparation for a strike in the Red Sea, but the Genoese government finally dissociated itself from the project and disputes broke out among the Genoese at Basra. Moreover, the Ilkhāns recruited Christian soldiers, and placed Jews and Christians in their administration – Arghūn, especially, who had little confidence in the Muslim Persian administrators. His reign saw the fall of Shams ad-Dīn Muhammad Juvainī, who was vizier under Hülāgū and Abaqa; Juvainī, had accumulated an enormous fortune, which represented “20% of the annual income of the state” (his father and grandfather had themselves been finance ministers under the Khwārezm Shāh and Ögödei Khān) (Bausani 1971: 113). Arghūn appointed the Jewish physician Sa’d al-Daulah as vizier. Al-Daulah restored the state finances, but he antagonized both the Mongol aristocracy and the Muslim notables, who managed to have him executed in 1291, a few days before Arghūn’s death.³³

The Mongol invasion also caused significant damage to agriculture: “the decline of the irrigation systems was due both to the initial destruction and to rural depopulation aggravated by taxation and abusive land confiscations” (Calmard 1995: 338) (see also Aigle 2006: 143). According to the historian of the Mongol Empire Ata al-Mulk Juvainī, at the beginning of the Ilkhānate, “every town and every village had been several times subjected to pillage and massacre and had suffered this confusion for years” (quoted by Wink 1997: 14). The decline in agriculture, however, had begun prior to the Mongol invasion, owing to the “devastating impact of religious factionalism” (Wink 1997: 14).³⁴ The great Nahrawan and Katul al-Kisrawi canals had not been

³² One of the reasons may have been that the Mongol khāns asked the European powers “to become vassals, [and] send tribute” (Boulnois 2008: 324). Before Abaqa, Hülāgū had asked the French king Louis IX for ships in order to attack Egypt.

³³ Arghūn also chose a Nestorian of Uighur origin sent by Kūblai as his emissary to Europe (see below).

³⁴ See also P. Guichard (2000: 195ff.), who links the agricultural decline to the development of the *iqṭāʿ* practice, the weakening of state control over the hydraulic systems, and the negative impact of nomadic populations.

functional for a long time: the shrinking of cultivated land areas around the cities would not allow their reconstruction on the same scale as before. Waṣṣāf, a historian at the Ilkhānid court, mentions the agricultural recession in the Fars province at the time his chronicles were written (prior to 1323). This recession was aggravated by climatic deterioration, which also affected other regions. Between fifteen and thirty taxes were levied on farmers, who often chose to leave. Craftsmen were hardly any better off; those laboring in state workshops were in a situation of dependency. The state implemented systems of forced sale for farmers and artisans, at prices lower than market prices (*tarḥ*) (Bausani 1971: 114–116). Moreover, under Gaykhatu, the economy was battered by the disastrous introduction of paper money following the Chinese model, a move suggested by the Mongol Bolad, a previous chancellor of Kūblai. The printing of paper money at Tabriz (1294), where both Genoese and Venetians were present, probably played a role in introducing this technique into Italy. The Mongol presence triggered other Chinese influences: “Chinese hydraulic engineers were employed on the irrigation of the Tigris and Euphrates basins” (Gernet 2002: 377). Chinese were also employed in Iran for the construction of a dam near Qum, and in Russia, the Mongols relied on the Chinese to organize the administration (Pacey 1990: 50).

During the Mongol conquests, many Muslims from western Asia chose to flee to Syria, Egypt, Yemen, or India. A Syro-Iraqi network appears to have been active during the thirteenth century between Yemen, Persian Gulf, and India (Vallet 2006: 490). Calicut was home to a sizeable Muslim community and became a major port.

Trade in the Persian Gulf, however, remained active throughout this entire period.³⁵ Merchants and Muslim rulers adapted to the new political climate and entered the service of the Ilkhānids. In Iran, the Salghurids of Shiraz, the vassals of the Mongol Great Khān Ögedey and of the Ilkhān Hūlāgū, ensured the prosperity of Fars during the thirteenth century. While Hormuz experienced a significant ascent, Aden kept its standing. After the “silver famine” of the eleventh and twelfth centuries in western Asia and Egypt, large quantities of this metal arrived from Central Asia via the kingdom of Khwarezm and later with the Mongols, as well as from Europe with the Crusades. The minting of dirhams, which had been stopped, was resumed by the end of the twelfth century in Iraq, Syria, and Egypt; it increased significantly after 1258 (Ashtor 1971: 32–36).

Marco Polo describes an itinerary from Baghdad (“Baudac”) to Baṣra; at the time, merchants wanting to go to India sailed to the city of Chisci (Qays) and to “Curmos” (Hormuz), whose king, who also ruled the city of “Calatu” (Qalhāt, near the modern Sūr) on the Omani side of the Gulf, which controlled the Gulf and the Indian sea: “the melic [of Qalhāt] can prevent vessels from sailing in or out without his consent” (Marco Polo, ed. Murray 1845 : 331). “The port [of Hormuz] is frequented by traders from all parts of India, who bring spices and drugs, precious stones, pearls, silk and gold textiles, elephant teeth and various other articles of merchandise. These they dispose of to a different set of traders, by whom they are dispersed throughout the world” (Marco Polo, ed. Masfield, 2003: 64). “From the city [of Qalhāt] many good horses are taken

³⁵ Although the Ilkhāns “preferred land routes to maritime trade,” it is difficult to accept the idea that “trade through the Gulf remained at a low level” (Rosenberger 2000b: 116).

to India and the merchants get great profits therefrom. One can hardly believe the enormous quantities of fine horses that are taken to India” (Marco Polo, ed. Ricci, 2005: 357).³⁶ “The men of this city [Hormuz] have many vessels; . . . they are bound, or rather sewed together, with a kind of rope-yarn stripped from the husk of the Indian (coco)nuts, and covered with a fibrous stuff like horse-hair [coir].”³⁷ The kingdom of Hormuz was only loosely controlled by the sultan of Kerman:

When the sultan [of Kirman] wishes to impose on the melic of Curmos [Hormuz], or any of his brothers, a duty that they refuse to pay, they straightway leave Curmos and, embarking on ships, come to the city of Calatu. Here they remain, and let no ship pass, so that the sultan of Kirman is greatly damaged. He is thus obliged to come to terms with the melic of Curmos, and does not take from him as much money as he had at first demanded. (Marco Polo, ed. Ricci, 2005: 358)

From the second half of the thirteenth century onward, the chiefs of Hormuz were the vassals of the Ilkhānid rulers of Persia, who levied a tribute on the customs revenues of Hormuz and Qays. In this city, members of the al-Tībī family, originating in Tib (Iraq), were preeminent. While their wealth was initially founded on horse trading with India, they also had agents in China. Around the end of the thirteenth century, the merchant Jamāl al-Dīn Ibrāhīm al-Tībī, who traded horses – for himself and for other Persian merchants – with the Pāndya kings of Madurai, maintained close relations with the Ilkhānid court.³⁸ The Ilkhāns Gaykhatu, Badu, and Ghāzān entrusted him with tax collection in Fars province, and later in southern Iraq, but he finally refused the concessions, which were at times too costly, as the collector had to make up, from his personal assets, the money due to the administration, in the event insufficient tax had been raised (Aigle 2005: 150).³⁹ Jamāl al-Dīn, who bought Qays Island for 200,000 gold dinars, “founded there a dynasty of merchant-princes” (Yerasimos 1980: 14). “According to the Persian geographer Ḥāfiz-i Abru, [he] had always nearly one hundred ships on the move, a figure probably exaggerated, although his ships were numbered in dozens” (Vallet 2006: 499). Jamāl al-Dīn’s brother was a minister in the Pāndya kingdom, “where he had obtained three free ports.” The alliance of political and commercial power allowed these two brothers to tighten

³⁶ Marco Polo 1980, 1: 79, 103, 11: 498. Marco Polo also notes the export of horses to India from the port of “Dufar” (see below).

³⁷ Marco Polo (1980, 1: 104–106), in this passage, describes a type of “sewn ship” of the western Indian Ocean. “These ships have one mast, one sail, and one beam, and are covered with but one deck.” “The planks are bored with iron drills as carefully as they can at the ends, and then are fixed with little treenails [dowels]. Afterwards, they bind them or they are sewn with coarse thread which is made of the husks of the trees of nuts from India [coir]” (Manguin 2012: 601, citing Marco Polo, 1: 37). Ships were caulked using “fish oil” and oakum (see above for the use of shark or whale oil in the caulking process).

³⁸ The rulers of Kerman also established links with big traders (Aigle 2005: 126).

³⁹ The account concerning the merchant Šams al-Dīn Muḥammad b. Malik Tāzīgū, who was eventually ruined by the duty of tax collection in Fars, provides a good example of the financial risks involved: gains could be huge (Waṣṣāf denounces the abuses perpetrated), and so could losses (Aigle 2005: 126, 206). Intrigues and rivalries also made the task of tax collection very risky, as Aigle clearly points out. Other states made use of tax collectors who had to take the same risks. In Egypt during the fourth century, private tax collectors sometimes paid the state in advance, in gold, and later levied taxes on the villagers (Bang 2009: 114).

their grip on the exchange networks, at two route ends – India and the Persian Gulf. According to Waṣṣāf, who is writing here of Taqī al-Dīn:

When merchandise from the Far East and from India arrives, his agents prevent the opening-up of any trade, and keep for him what is the most interesting; he sends this [merchandise] to Qays on his own ships; on Qays, once again, no one may trade before Malik-i Islām's [Jamāl al-Dīn Ibrāhīm's] agents have chosen [what they want], in particular fabrics. Then, they authorize the [other] merchants to buy. (Vallet 2006: 499)

Jamāl al-Dīn Ibrāhīm organized the shipping of 1,400 horses “of his own breed” (probably from Iran) each year, from Qays to Ma‘bar; other horses were bought in “all the isles of Persia,” Qatīf, al-Hasa, Bahrain, Hormuz, and Qalhāt.⁴⁰ Qays also had connections with Aden, as seen in the numerous references to this Gulf port in the Yemeni manuscript *Nūr al-ma‘ārif* (1294) (Vallet 2006: 463). According to Waṣṣāf, at the time of the *atabeg* Abū Bakr (belonging to the Salghurid dynasty), 10,000 horses were exported yearly to Ma‘bar, Cambay and other ports of India, for a total amount of 2,200,000 dinars. A son of Jamāl al-Dīn Ibrāhīm, having lived for several years in China, took back the tax farming operation in Fars after his father's death in 1306. Owing 300 *tomams* and unable to pay this sum back, he fled to the coast (Aigle 2006: 153). After 1316, one no longer finds merchants appointed as tax farmers in Fars (Aigle 2006: 155), a sign of the decline of the al-Tībī family and of long-distance trade with India. Hormuz, the rival of Qays, was partly responsible for its decline. At the beginning of the fourteenth century, the Turk Ayāz moved the city to the island of Gārūn (“the New Hormuz”), where he built a war fleet and a system of fortresses. In 1327, Qays was captured by the prince of Hormuz, who confiscated the wealth of the al-Tībī family and put the heirs of Jamāl al-Dīn Ibrāhīm to death (Vallet 2010b: 556). Hormuz would later cover 80 hectares during the fourteenth and fifteenth centuries.

The Mongol invasions affected trade through the Persian Gulf during the thirteenth century, and for more than a century. “Aleppo lost its role as hub between the Mediterranean and the eastern networks. Trade routes ran further north,” in Anatolia, or further south, through Egypt (Garcin 2000: 303). Caravans used trade routes linking Tabriz and China as well as a steppe route north of the Caspian Sea. Along these Inner Asian routes traveled merchants from Europe⁴¹ and western Asia, as well as Mongols and Chinese. Chinese craftsmen were present around 1260 in the Samarkand region, and during the fourteenth century, the cities of Tabriz, Moscow, and Novgorod had Chinese districts (Gernet 2002: 377). These movements favored a fresh spread of Chinese techniques to the west. J. Gernet mentions “explosives at the end of the thirteenth century, the spinning wheel around 1300, woodblock printing,

⁴⁰ The price for each horse reached “220 dinars of red gold” (Digby 1982c: 148, after Waṣṣāf).

⁴¹ The brothers Nicolo and Maffeo Polo, Marco's father and uncle, left Venice in 1254, after a sojourn in Crimea and on the Volga; they then traveled from Bukhara to Karakorum. They returned to Italy in 1269 and traveled again with Marco in 1271, this time following the Silk Roads. The Italian Franciscan John of Montecorvino, who was appointed archbishop of Beijing, embarked at Hormuz (1291) and followed a maritime route to Quanzhou. The sending of Giovanni di Monte Corvino followed the visit to Rome of a Nestorian monk of Turkish origin, born in Beijing, Rabban Bar Sauma, who acted as the ambassador of the Ilkhān Arghūn (Gernet 2002: 374, 376). Freed Christian slaves who came back to Europe were also involved in these transfers of knowledge.

which was to give rise, as in China, to printing with movable type, and cast iron, at the end of the fourteenth century” (2002: 348).⁴² In the Muslim world, the use of saltpeter in gunpowder was known in the thirteenth century. Incendiary devices were thus used at the battle of al-Mansura in 1249 against the Crusaders. In 1270, the Syrian chemist al-Rammah gives seventy gunpowder recipes and describes the use of rockets and torpedoes in his *Book of Military Horsemanship and Ingenious War Devices* (al-Hassan and Hill 1991).⁴³

At the end of the thirteenth century, the Ilkhān Ghāzān (1295–1304) converted to Islam – primarily for political reasons – and denied the suzerainty of the Great Khān. Ghāzān and his successor Abū Saʿīd (1317–1335) attempted to enhance agricultural production, and at the same time extended the *iqṭāʿ* system to fund the military sector. Ghāzān granted an amnesty for insolvent debtors, and tax concessions were offered to those who developed abandoned farmland. He also regulated tax collection, by giving new authority to Persian officials. A unified system of weights and measures was implemented. While Waṣṣāf relativized the effects of Ghāzān’s reforms, Rashīd ad-Dīn Hamadānī and al-Qazwīnī, who were also working for this Ilkhān, valorized them (Aigle 2005: 150). Having become “extraordinarily rich,” Rashīd ad-Dīn Hamadānī at last fell victim to intrigues under the reign of Abū Saʿīd, who had him executed and confiscated his assets. Abuses of public power and the difficulties experienced by the population led to social disorder under Abū Saʿīd, and worsened after his death. Grassroots reactions resulted in the appearance of egalitarian movements, for example in the “republic” of Sabzavīr,⁴⁴ reflecting the growing connections between Shiism and Sufism (Bausani 1971: 121).

Under Ghāzān, relations with Egypt remained conflictual despite the Ilkhān’s conversion to Islam. Ghāzān maintained amicable relations with the western powers. External conflicts tended to ease thereafter; Abū Saʿīd started peace negotiations with the Mamluks (treaty of Aleppo, 1323), and established contacts with the Delhi sultanate. Persian and Iraqi merchants settled in Cairo, favoring in return an extension of Egyptian trade in Asia.

Some authors have written of a relative socioeconomic revival under the Ilkhāns during the early fourteenth century and later – for Iraq – under the Jalāyerids from 1340 onward, although “the benefits of the so-called *pax mongolica* for Iran should not be exaggerated,” as Calmard notes (1995: 339). At least some of the fabrics and spices that were carried to Cairo and Syria (an Egyptian territory) transited through Baṣra. Along with Qays,⁴⁵ Hormuz and Muscat were significant ports. Hormuz had a key influence along the Makran coast and in Gujarat. The New Hormuz, writes Ibn Battūta, “is the port of India and Sind, from which the wares of India are exported to the two ʿIrāqs,

⁴² A glass window in Chartres Cathedral, dated to around 1220, features a wheelbarrow. See above as to these transfers, especially those of gunpowder and guns, which followed various routes.

⁴³ A book written by Ibn al-Bayṭār in 1240 had already named saltpeter “Chinese snow.” Al-Rammah states that many of his recipes were known to his father and grandfather, hence they dated back to the late twelfth century. As early as 1100, various gunpowder recipes may have been known (see above).

⁴⁴ Abd al-Razzaq, the initiator of the revolt in 1337, did, however, belong to the local ruling class.

⁴⁵ Various Chinese ceramics have been excavated at Qays: Longquan celadons, *qingbai* porcelain, and stoneware jars (Rougeulle 1996: 175). Chinese imports have also been unearthed at Shenān and Khung, between Qays and Hormuz.

Fārs and Khurāsān” (Ibn Battūta 1959, 11: 400). Hormuz was a great center for horse exports, and it imported textiles, spices, ivory, indigo, and other goods. Between 1327 and 1331, the sultan of Hormuz established his authority over Qays, as noted above, and also over Bahrain. In addition, a large part of Oman was under his control.

Persian influence was significant along the South Arabian coasts (Yemeni pottery found at Hormuz dated to the fourteenth century reveals the links between Iran and Aden) and in East Africa. A high proportion of foreign Muslim merchants in India came from Persia, also from Bahrain and Oman.⁴⁶ Various sources indicate the importance of the Sufi order of Kāzerun, “whose lodges served as relays and banks for the merchants” (Aubin 1988: 86).⁴⁷ From the Persian Gulf to India, vessels could either sail along the western coasts of India, like the ships in which the Venetian Niccolò dei Conti and later the Russian Afanasy Nikitin traveled, or make a direct crossing, like ‘Abd al-Razzāq, who sailed from Qalhāt to Calicut in eighteen days in 1442.⁴⁸ Data given by al-‘Umarī in his description of India largely emanate from a horse merchant from Bahrain. The *shāhbāndar* of Calicut, in whose home the Muslim merchants met, when Ibn Battūta visited the city, was a man from Bahrain. The governor of Cambay at this time had a sheikh from Isfahan at his side, “who served as his substitute in all subjects related to his work” (Ibn Battūta 1982, 111: 184). The Tamil king of northern Sri Lanka, whose maritime power Ibn Battūta emphasizes, understood Persian (Ibn Battūta 1982, 111: 256). The Persian language and culture also had an impact on the Thai–Malay peninsula and in Indonesia, especially through men from Gujarat, who took an active part in introducing Islam. We know, from Ibn Battūta and the Chinese chronicles, that a sizeable Persian colony was present at Quanzhou during the fourteenth century (Ibn Battūta 1982, 111: 324). It owned its own militia, which would revolt in 1357. Persians also settled at Malacca during the fifteenth century. The significant increase in Chinese ceramic imports in western Asia after the fourteenth century was partly due to Persian merchants, and also to ships belonging to the fleet of Admiral Zheng He, who visited Hormuz during the course of several expeditions.

The overall trade balance of western Asia with southern Asia was in deficit, but this deficit was largely covered by profits from trade with Europe, Central Asia, and the East (Frank 1998: 84). For the Persian Gulf region, horses constituted a major export to India, as Marco Polo had already noted in the thirteenth century (see above).

Increasing exchanges in the world-system during the thirteenth and early fourteenth centuries fostered new cultural developments, in the arts and sciences. The thirteenth and fourteenth centuries saw the flourishing of Persian miniatures (schools of Shiraz

⁴⁶ Digby 1982c: 146. Emphasizing the importance of the Persian Gulf, Digby also notes that “when the sultan of Delhi wished to bring Arabs into his service, he sent a ship to Hormuz and Qatif, not Aden” (1982c: 146). However, legal and religious scholars present in India at the time of Ibn Battūta came from various parts of the Muslim world, including Mogadishu and northern Africa.

⁴⁷ Very influential during the first half of the fifteenth century, “its shaykhs negotiated an agreement between Timurids and Mamluks concerning the Holy Places of Hejaz.” The Safavids massacred the members of the order in 1504 in Fars, but the order had already lost its widespread influence at this time. One notes a significant development of Sufism in the Turco-Iranian world from the Ilkhāns, with Shiite themes penetrating some *tarika* (Calmard 1995: 334).

⁴⁸ Digby 1982c: 147. He sailed back from Honavur to Qalhāt.

and Tabriz) influenced by eastern Asia (Chinese artists were present at the Ilkhānid court). The popularity of these miniatures was inseparable from poetry by Nizami (twelfth century), Saadi (thirteenth century), and Hafez (fourteenth century). Many manuscripts were produced at Marāgha, Tabriz, Shiraz, and Baghdad. However, as already emphasized, the global progress of Islam during the thirteenth and fourteenth centuries was accompanied by a stricter monitoring of thought. Authorities thus opposed the use of printing, which had been imported from China.⁴⁹ One sees the growth of religious intolerance, sometimes in reaction to the development of mystic sects. Nevertheless, Islamic science continued to progress in various domains, such as astronomy, mathematics, and medicine. The school of the astronomical observatory at Marāgha (with aṭ-Ṭūsī, who died in 1274), and later the scholar Ibn ash-Shāṭir from Damascus (who died *c.* 1375), developed non-Ptolemaic planetary models that Copernicus would later use, but without daring to progress from a geocentric to a heliocentric system.⁵⁰ The Syrian Ibn al-Nafis (1213–1288), who criticized Galen, was the first – long before Michel Servet (1511–1553) – to correctly describe blood circulation. We are indebted to the Persian al-Fārisī (1267–1320), a pupil of the astronomer and mathematician al-Shirazī (himself a pupil of aṭ-Ṭūsī), for significant work in optics and a book on the theory of numbers. However, a degree of regression has been noted from the thirteenth century onward, reflected in “conformism on the objects and tools of the science or an absence of [theoretical] reflection” (Djebbar 2001: 123).⁵¹ A religious reaction led to the closing of the Marāgha observatory around 1320. Contacts among the various regions of Asia, Africa, and Europe, however, allowed for exchanges of knowledge and intellectual advances. Rashīd ad-Dīn Hamadānī (1247–1318) wrote a universal history that benefited from the contribution of Chinese scholars and European sources. The influences of Muslim scholars and artisans on the Chinese world have been mentioned above.

As was the case for the entire world-system, the Ilkhānid Empire went into decline during the 1320s. Trade was probably decreasing in the Gulf as of 1325. Following Abū Saʿīd's death, factional struggles accompanied the disintegration of the empire, within the context of a disastrous economic situation that was partly due to excessively high taxes (Calmard 1995: 325) and during a period of sharp deterioration in the climate. Various regions were stricken by famine from 1336 onward. Moreover, plague epidemics began spreading in 1340. The Jalāyerids (a dynasty of Mongol origin)

⁴⁹ We have examples of books printed in Egypt during the fourteenth century (Huff 1993: 79). During the fifteenth century, the authorities officially banned the use of printing.

⁵⁰ Huff 1993: 59; McClellan and Dorn 1999: 109. Ibn al-Haytham (who died *c.* 1040), a mathematician and astronomer who lived in Cairo, also known for his research in optics, was one of the first to criticize the Ptolemaic model. Other scholars should be mentioned in astronomy, especially al-Bīrūnī (he was born in Khwarezm in 973, and died in Ghazni in 1048), whose immense knowledge was showcased in highly diverse fields. Regarding the links between aṭ-Ṭūsī's and Ibn ash-Shāṭir's work and that of Copernicus, see Saliba 2007: 193ff.

⁵¹ Besides the monitoring of thought imposed by the theologians, the strict adherence to Aristotelian views also imposed a limit on scientific thinking. G. Saliba (2007: 23), however, argues that there was continuous progress in science in the Muslim world: unlike what has been written elsewhere, Islamic science did not go into decline following the attacks by Ghazālī: the golden age of Muslim astronomy in fact occurred during the post-Ghazālī period.

established an independent power at Baghdad from 1340, while the Muzaffarids from Yazd controlled Fars for some time after 1357.

The Formation of Tamerlane's Empire

It was in the context of a divided Ilkhānid area that Tamerlane (Timūr Lang)'s armies burst onto the scene, even more devastating in their impact than the Mongol invasion of the thirteenth century. Tamerlane's cavalymen were truly "horsemen of the apocalypse" (Palat 2015: 75). Timūr Lang, who had seized power in Transoxiana in 1370 in a state formed from the khānate of Djaghatai, invaded Iran in 1381. He captured Tabriz in 1385 and took away 90,000 prisoners. Between 1387 and 1396, Iran, Iraq, and the Caucasus were devastated; 70,000 people were massacred at Isfahan (1387). In the west, Tamerlane's troops reached Moscow. New raids affected Iraq and Syria between 1400 and 1402, marked by new massacres (for example at Baghdad in 1401) and the deportation of craftsmen to Samarkand. The defeat incurred by the Ottomans at Ankara in 1402 – where the sultan Bayazid I was taken prisoner – delayed the capture of Byzantium by the Turkish Empire for fifty years.

Tamerlane was an accomplished warrior and a charismatic leader, who also drew his legitimacy from messianic ideas within Islam (Moin 2012).⁵² He chose Samarkand as capital of his Muslim Empire. This city would become a sizeable center for production and trade. In his attempt to rebuild Genghis Khān's empire, Tamerlane secured the southern branch of the Silk Roads and destroyed Sarai, the capital of the Golden Horde, in 1395, which had the benefit of the northern routes of Central Asia.⁵³ Tamerlane's aim, clearly, was to control the routes between China and Europe, at a time when trade was once again increasing within the Afro-Eurasian world-system. The Castilian embassy led by Ruy Gonzales de Clavijo to Tamerlane's court in 1403 describes the wealth of Samarkand:

The markets of Samarkand are amply stored with merchandise imported from distant and foreign countries. From Russia and Tartary come leathers and linen, from Cathay [China] silk stuffs that are the finest in the whole world . . . Thence too is brought musk which is found in no other land but Cathay, with balas rubies and diamonds which are more frequently to be met within those parts than elsewhere, also pearls, lastly rhubarb, with many other goods. The goods that are imported to Samarkand from Cathay indeed are of the richest and most precious of all those brought thither from foreign parts, for the craftsmen of Cathay are reputed to be the most skilful by far beyond those of any other nation . . . From India there are brought to Samarkand the lesser spices such as nutmegs and cloves and mace with cinnamon, with ginger and manna, all these with many other kinds that are never to be found in the markets of Alexandria. (Drège 1986: 202)

⁵² In Central Asia, millennial beliefs flourished at the turn of the Islamic millennium, within the context of a declining Mongol order. Commenting on A. Moin's book, R. Fischel notes that Timur's legitimacy was based partially on "his identification with and monopolization of the astrological-millennial title 'Lord of Conjunction' (*sāhib qirān*). Timur's image also became associated with 'Ali, who by the fifteenth century had become a central figure in messianic practices within Islam. This link was made possible by the cyclical concept of time prevailing in millennial cosmology" (Fischel 2014).

⁵³ Tamerlane initially supported the Great Khān of the Golden Horde, Tokhtamysh; however, this ruler turned against him in 1385.

Against the Ming state, Timūr adopted a strategy of disruption by murdering envoys from the Chinese emperors in 1392, 1402, and 1403. He died in a riding accident in 1405 while he was preparing to invade China. Tamerlane's rise was based on the setting up of a powerful army paid from taxes levied on the agrarian countries that he controlled.⁵⁴ He sought to attract merchants, as shown in a letter sent to the king of France:

It is necessary for your merchants to come to our regions so that we will be able to welcome them warmly and for our merchants go to your regions where they could be welcomed in the same way. Let them go freely to and fro without causing them any trouble. I do not have to tell you that the world becomes more prosperous through trade and merchants.⁵⁵

In the chaotic history of western Asia, the flourishing of Qays and Hormuz between the eleventh and fourteenth centuries should not create a misleading impression. It was the Red Sea that, from the late ninth century, dominated trade networks between the Indian Ocean and the Mediterranean. Controlling the Levant from Saladin's reign onward, Egypt was the new predominant power within the Muslim world. The role of Yemen as a hub and semi-periphery of the world-system was thereby strengthened.

⁵⁴ Di Cosmo (1999a: 35) comments that Tamerlane, by contrast, neglected to incorporate the steppe regions within the empire, because they offered little economic advantage.

⁵⁵ Archives Nationales, reference AE/III/204. Tamerlane's ambassador was a Dominican monk who bore the title "archbishop of Sultanieh [Sultaniyya]" (Moranvillé 1894).

11 Egypt and Yemen: The Jewish and *Kārimī* Networks

Whoever imports merchandise, such as spices or other goods that the merchants of the *Kārim* usually import, will have nothing to fear for his rights. He will not be compelled to accomplish any unpleasant obligation, but will obtain justice and will be protected from any infringing measure. (From a “safe conduct” by Sultan Qalāwūn, in 1286, renewing “the safeguards and protection given to merchants from Yemen,” Vallet 2010b: 497)

Egypt under the Fatimids, Ayyūbids, and Mamluks: Prosperity (1000–1340) and Decline (1340–1380)

The Fatimid Reign

Under the Fatimids, who took power in 914, Egypt’s influence inched upward, and this was felt throughout the western Indian Ocean. Fustāṭ was “the initiator of international trade” at that time (Fu’ad-Sayyed and Gayraud 2000: 152). The Fatimids ceded control over Syria to the Seljuks in 1070, maintaining control over Egypt until the installation of the Ayyūbid dynasty (1171–1260). The Mamluks, who were Turkish slaves of the Ayyūbid sultans, later reigned over Egypt, creating the Bahrite dynasty (1260–1382): pretexting the ideological “defense of endangered Islam, a military class confiscated power for its own benefit” (Garcin 1995b: 343).

While the Fatimids were Ismailis, they entrusted the management of the state to officials – often of Syrian or Iraqi origin – who were Sunnis, Christians, or Jews (Bianquis 2000: 14). Until the eleventh century, the bulk of the rural Egyptian population remained Christian. Benjamin of Tudela counted 30,000 Jews in Egypt, with 7,000 of them living in Cairo. “Rabbi Nathanael, the prince of princes and the chief of the academy and of all the Jews from Egypt [lived there]. He was also the minister of the great king who lived in the palace of Tsoane el-Medinah” (Harboun 1986: 131).

According to some researchers, Egypt experienced a series of low Nile floods during the eleventh century, between 1022 and 1070 (Hassan 1981, 2007), and perhaps between 1052 and 1090 (Jiang *et al.* 2002).¹ During the period 1065 to 1073, poor harvests

¹ While they disagree on other periods, Russell and Hassan agree on weak Nile flooding between 1022 and 1070 (Brown 2001: 169). Quinn (1992), however, lists only ten low Nile floods during the eleventh century, and only three during the twelfth century; these data appear to be in accordance with

occurred, along with famine and social disorder. It is possible, as Shaban (1978) argues, that the Fatimid state neglected to maintain its agricultural infrastructure, “which traditionally required from a third to a fourth of annual revenue” (Findlay and O’Rourke 2007: 57).² While Egypt’s population appears to have been in decline from 950 to 1050, the population grew after 1100, in particular by the late twelfth century, thanks to Saladin’s efforts to develop irrigation, and thanks to higher Nile flooding.³ The country did develop its productions of sugar, paper, glass, and textiles: these provided the bulk of exports, as early as the tenth and eleventh centuries. State workshops or *tiraz* thus manufactured fabrics embroidered with gold and silver threads; these were also produced by private workshops.⁴

Fatimid Egypt set itself up as a crossroads for international trade. Treaties were signed with the Byzantine Empire in 1038 and 1048, securing Egyptian control over the Levant. Egypt exerted its suzerainty over the holy cities in the Hijāz and over Yemen, which was subdued by the Sulayhids’ Ismaili dynasty from 1047 onward. Al-Qalqashandī reports a Fatimid naval presence – in fact a very limited one – destined to protect merchant convoys in the Red Sea (see below); for Goitein and Friedman (2007: 21), the Fatimids were clearly determined to wrest command over Indian trade from their Baghdad rivals. According to other researchers, however, the Fatimids paid little heed to the Red Sea prior to the late eleventh century, and at that time, their interest was primarily fiscal (Bramoullé 2011; Vallet, p.c.). Whatever the case, from the tenth century onward, Egypt and the Yemeni hub dominated Indian Ocean trade.

The Fatimid caliphs played an active economic role: they owned a fleet, many *funduq*,⁵ and thousands of shops: “Viziers’ households and businesses were separate in name only. Their enterprises were among the largest capitalistic undertakings of their time” (Labib 1969: 92–93). While the Fatimid caliphs did not hesitate to monopolize trade in certain (lucrative) goods, “which they could sell at expensive prices to individual [merchants]” (Rosenberger 2000a: 256), they also allowed free enterprise to develop (Goitein 1967; Ashtor 1976; Findlay and O’Rourke 2007: 56). In addition, the Fatimid governors often conducted private business (Bianquis 2000: 74), and some imbrication of the state and the private sector can be seen. The state institution of the *matjar*, or “Trade Office,” appeared during the years 1052–1053 (Serjeant 1988a). The *matjar* managed the state monopoly on silk, olive oil, lead, and other products:

what is known about this period of the “Medieval Climatic Optimum,” marked by abundant monsoon rainfall in the Indian Ocean. Hassan (2007, 2011), curiously, notes that the Nile regime between 850 and 1080 seems “inversely correlated to the monsoon of the Indian Ocean”; in fact, there may have been a weakening of the monsoons during a part of the eleventh century. Summer sea surface temperatures in the northern Atlantic appear to have decreased between 1050 and 1070 (Berner *et al.* 2011), which is in agreement with data from dendrochronology (Cook *et al.* 2004) and the observation of a decline in solar activity (“Oort minimum,” 1040–1080).

² This may not have been the case during the early days of the Fatimid Empire.

³ Brown 2001: 193. Between 1066 and 1072, Egypt experienced a series of famines. Famines and epidemics struck once again in 1096–1097 and 1099–1100.

⁴ The vizier Ibn Killis, born at Baghdad, a Muslim of Jewish origin, “was found to have been holding 500,000 dinars worth of luxury textiles at his death in 991, with a further 16,000 dinars invested in the industry” (Findlay and O’Rourke 2007: 56).

⁵ The term *funduq*, as noted above, is probably of Greek origin (*pandokeion*), via Aramaic; the Italians would later borrow it from the Arabic (*fondaco*).

“this office had priority over purchases – at determined prices – of iron, wood, and bitumen; these goods were acquired from European merchants partly in exchange for alum, on which the state had a monopoly. The state also monopolized trade in natron, and emeralds” (Rosenberger 2000a: 257). Some merchants obtained access to influential functions and even to the position of vizier. A famous example is provided by the Tustārī brothers, from Ahwāz, “who were Jewish bankers and traders in luxury goods from the Indian Ocean and China”; they governed Egypt from 1036 to 1048 (Lombard 1971: 169). Tax collection was leased to great merchants. In order to facilitate trade with foreigners, the Fatimids created the office of *wakīl al-tujjār*, which served as the legal representative for foreign merchants in each city, collecting reimbursements of debts, storing their merchandise, carrying out their orders to buy or sell, and sometimes operating *fondūq* or lodging houses for foreign merchants.⁶ This *wakīl* arbitrated between merchants, and “his house served as a Bourse.” “He could serve simultaneously as superintendent of the port, and as tax-farmer for customs and other dues” (Goitein 1967: 188–189). Iraqi and Persian merchants settled in Egypt. Traders from Amalfi, Pisa, and Genoa were also present during the twelfth century, and a commercial treaty was signed with King Roger II of Sicily in 1143. Jewish and Christian traders enjoyed extraterritorial immunity in the quarters where they resided (Goitein 1967, 1: 62ff.; Chaudhuri 1991: 437).

At that time, the cities of Alexandria, Damietta, and Fustāṭ were major centers for production and trade. Fustāṭ produced cotton fabrics, using thread imported from Iraq, and silk made of thread from Syria, Iran, Sicily, or Spain. The Jews dominated the longstanding manufacture and trade of silk in Palestine and Syria. Craftsmen from Fustāṭ used furs from Russia, and worked ivory from East Africa and India (Fuʿad-Sayyed and Gayraud 2000: 153). In addition, Fustāṭ was the primary center for the glass industry in the Muslim world, until 1168, when, fearing the Crusaders’ arrival, the vizier Shawar had the workshops destroyed (Wood 2000: 84).

Our knowledge of the commercial networks centered on Egypt during the eleventh and twelfth centuries comes from the discovery and study of documents found in the Geniza of an old Cairo synagogue.⁷ They reveal the significant role played by Jewish merchants in the Mediterranean and the Indian Ocean at this time.⁸ These documents

⁶ See Curtin 1998: 113. This *fondūq* system was borrowed from the Italian ports. Semi-official, the position of *wakīl al-tujjār* was sometimes hereditary; thus, in Aden, four generations of Jewish merchant representatives succeeded one another (Goitein 1967: 188). Unlike what has sometimes been written, the *wakīl al-tujjār* was not a “chief of the merchants”; this title and function would appear later in Mamluk Egypt and Rasūlid Yemen (at the end of the fourteenth century) for merchants doing business alongside the sultan (E. Vallet, p.c.). According to Goitein, however, one can see a connection between this office of “chief of the merchants” and the institution of the consulate in the Italian merchant colonies on the Levant (Margariti 2007: 292). It can also be argued that, in the ensuing centuries, the position as chief of the merchants of Cairo “might represent a more developed stage of the *wakīl al-tujjār* of the High Middle Ages” (Goitein 1967: 192).

⁷ Geniza has the meaning of “room attached to a synagogue where archives are deposited” (Goitein 1954a: 182).

⁸ Few of the letters from the Geniza relate to the Indian Ocean; most deal with trade in the Mediterranean (Goitein 1954a: 182). It is surprising, however, that B. Rosenberger writes (2000b: 112): “the Mediterranean and the Indian Ocean remained two maritime areas which did not communicate, or were barely connected with each other.”

underscore the role of Aden and the extent of Indian Ocean networks. From a family of Persian origin, Madmūn ben Hasan, merchant representative and superintendent of the port of Aden, and a shipowner, acted as intermediary between the Jews of the Mediterranean and those who had settled in India.⁹ Madmūn held the title “leader of the Jewish community of the Indian Ocean,” as did his descendants; his position was recognized by both the Jewish Exilarch of Baghdad, then under Seljukid rule, and by the chief of the Jewish community in Egypt. His father, Hasan-Japhet ben Bundar, had already served as representative of the merchants, and as “leader of the Jewish congregations” (Goitein and Friedman 2007: 37ff.); he had also been in charge of customs at Aden. The Jewish merchants exported textiles such as silk and Russian fabrics, copper, lead, silver vessels and ornaments, bronze, glass, storax, olive oil, coral, and paper¹⁰ to India. Textiles,¹¹ spices, aromatics, remedies, plants for dyeing and varnishing, wood, iron and steel, and brass or bronze vessels were imported. Thus a variety of products were transported, not just luxury goods.

Goods from East Africa are also mentioned: ivory, ambergris, and rock crystal (from Madagascar, or Tsavo) arrived at Aden and Qays. “It is probable that the African commodities went to these centers first, to be collected by ships sailing between Egypt and India” (Horton 1996: 417). Around 1050, al-Bīrūnī writes: “*billawr* (rock crystal) is transported from the islands of the Zanj and other islands to Basrah, where it is worked to produce vessels” (Allibert 2015). Interestingly, unlike the Jews of western Asia and Central Asia (Radhanite Jews, Jews from Khorasan . . .), the Jewish merchants of Aden and Egypt appear to have remained clear of involvement in the slave trade (see, however, Wink 1990: 98).

Indian imports were paid in part with precious metals, gold and silver. At the end of the eleventh century, only 10 percent of the merchandise from India was acquired in exchange for gold; during the twelfth century, however, it seems to have been more profitable to pay with this metal. Gold from West Africa and from the Sofala coast was transported to Egypt at that time. “Until the 1070s, West Africa was the primary supplier of bullion to Egypt” (Bacharach 1983: 161).¹² Yet the end of the Fatimid period

⁹ Various letters addressed to the Tunisian Jewish merchant Abraham ben Yijū, who had settled on the Malabar coast between 1132 and 1149, are among the documents related to Madmūn ben Hasan. The letters concerning ben Yijū show that at times, he was Madmūn’s agent, and he also partnered with various merchants. When Makhlūf ben Mūsā, a Jewish merchant operating between Spain and India, claimed a considerable amount of money from ben Yijū, Madmūn paid for ben Yijū (Goitein and Friedman 2007: 65). Ben Yijū exported iron, areca nuts, spices (pepper and ginger), and brass products from his own workshop. Indeed, Abraham ben Yijū was not only an importer/exporter, but also the owner of a metallurgical workshop in India that produced bronze and brass objects, using copper and tin from Aden. Work was performed by Jewish artisans and slaves. When he left India, ben Yijū settled in Aden, and later went to Egypt, where his family was living.

¹⁰ We have no evidence for paper manufacturing in India prior to the thirteenth century. Paper was produced there on a significant scale only following the Muslim conquest.

¹¹ Digby 1982c: 145. Indian textile fragments have been unearthed from a cemetery at Fuṣṭāṭ (Cairo), but they are dated to the fourteenth and fifteenth centuries (see the textile collection at the Ashmolean Museum, Oxford).

¹² Gold also came from Ethiopia. It is possible that the gold supply was disrupted by disorders caused by the Arab tribes of the Banu Hilāl and later of the Banu Sulaym in northern Africa during the eleventh century; however, gold coins were issued in Egypt at the end of the eleventh and during the first half of the twelfth

Illustration 1

The Tang Empire and the Silk Roads (1)



(a) Caravanner riding a camel. Terracotta, Tang period. H.: 43.5 cm. Guimet Museum, MA6721.
© RMN, Thierry Ollivier



(b) Silk cloth depicting a hunting scene showing Iranian influence, 41.9 x 29.2 cm, found in Tomb 191 from Astana, Turfan, Xinjiang. Late seventh – early eighth century. Xinjiang Uighur autonomous region Museum. © Cultural Relics Publishing House Beijing

Illustration II

The Tang Empire and the Silk Roads (2)



(b) Man from Central Asia, carrying a bag on his back. Polychrome terracotta. H.: 24.5 cm. Musée Guimet, MA 4679. © RMN-Grand Palais, Thierry Ollivier



(a) Buddhist pilgrim carrying books in rolls. MS Pelliot 4518. © Bibliothèque Nationale de France

Illustration III

The Tang Empire and the Silk Roads (3)



(a) Vase, northern China, sixth century. Ashmolean Museum, Oxford, EAr956.964. H.: 38.3 cm. The decoration of lotus leaves, half-palmettes, and discs is of Sassanid origin, via Central Asia. © Ashmolean Museum, Oxford



(b) Carafe with phoenix head, and *sancai* decoration using the three-color design, which the Islamic world would adopt. Tang period. Musée Guimet, MA 6587. © RMN-Grand Palais, Thierry Ollivier



(c) Small flask. Stoneware. Its shape and decoration show Iranian influences. H.: 14 cm. Tang period. Musée Guimet, G 2435. © RMN-Grand Palais, Thierry Ollivier

Illustration IV

The Tang Empire and the Silk Roads (4)



(a) Female polo player. This game originated in Central Asia. Polychrome pottery. H.: 31 cm. Musée Guimet, MA4708. © RMN-Grand Palais, Robert Asselberghe



(b) Female dancer wearing a long-sleeved robe. This costume derives from Central Asian fertility rituals. H.: 25.8 cm. Musée Guimet, MA 4708. © RMN-Grand Palais, Jean-Yves and Nicolas Dubois



(c) Black boy with curly hair. Black people were traded from Indonesia on one side of the ocean, and from East Africa on the other. The term Zangi referred to Africans (from the Arabo-Persian *Zang/Zanj*). British Museum, London, OA 1936.10-12.288. © The Trustees of the British Museum, London

Illustration v
The Muslim Empire and the trade routes (1)



Interior of the Umayyad mosque, Damascus; niche (*mihrab*) and pulpit (*minbar*). The mosque was built during the early seventh century above St. John's Church, which was itself erected above a Roman *temenos* dedicated to Jupiter. © Photo: Paolo Koch / Gamma-Rapho

Islam appeared in the Arab semi-periphery during the sixth century and spread as far as India and Central Asia in one direction, and Spain in the other, during the seventh and eighth centuries, within the context of the formation of an Islamic Empire and along trade networks. Along with the Tang Empire, this Islamic space would become the driving force of the world-system.

Illustration vi
The Muslim Empire and the trade routes (2)



The sessions (*Maqâmât*) of Harîrî (1054–1122), illustrated by al-Wâsitî, Baghdad, 1237. Arabic manuscript 5847, fols. 105r and 5. Bibliothèque nationale de France, Paris. (a) Slave market. (b) Library of Hulwân. © Bibliothèque nationale de France

Illustration VII

The Muslim Empire and the trade routes (3)



(a, b) From an Arabic translation of the *De Materia Medica* by Dioscorides dated to the eleventh century. On the left: incense, a plant from southern Arabia. On the right: cardamom, a plant originating in Southeast Asia. Leiden, MS Or. 289 fols. 5v and 17r. © University Library, Leiden

Spices and aromatics featured prominently in the products traded by Muslim merchants.



(c) Decorative strip from a tunic; silk, Egypt, eighth century. Imported from India? H.: 104.1 cm, L.: 10.8 cm. © Musée historique des tissus, Lyon



(d) Sassano-Islamic jar, from Iraq or Iran, tenth century. Victoria and Albert Museum CIRC. 106-1929. © Victoria and Albert Museum, London

Illustration VIII

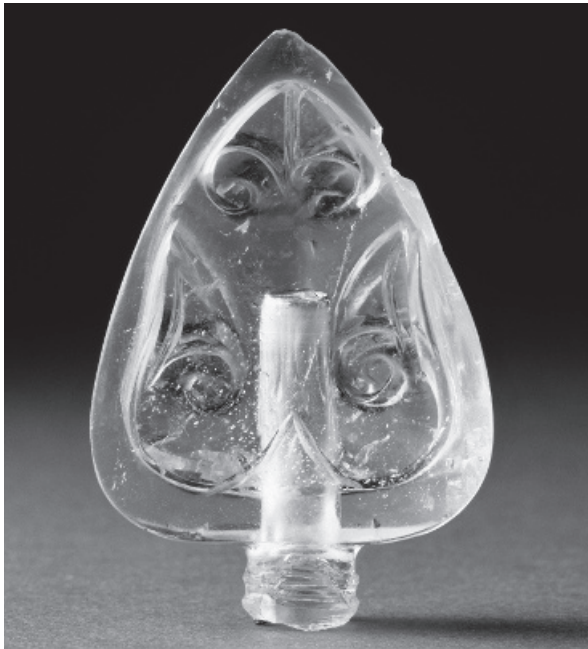
The Muslim Empire and the trade routes (4)



(a) Ivory pyxis of Prince Al-Mûghirâ, 968, Córdoba. Louvre OA4068 © RMN-Grand Palais, Hervé Lewandowski

The decoration depicts life at the court and expresses kingship. The duplicated motif of the lion attacking an ox continues an ancient western Asian theme. On the left, a pair of wrestlers and birds of prey. The other side depicts horsemen pillaging nests, a lute player, hunters facing each other on either side of a palm tree, a peacock . . .

The Islamic Empire imported large quantities of ivory from East Africa; rock crystal also came from there.



(b) Heart-shaped vial made of rock crystal, ninth century, Egypt. Louvre, OA3861. © RMN-Grand Palais, Hervé Lewandowski



(c) Abbasid dinar of al-Mansûr; gold, 4.21 g. © Fritz Rudolf Künker GmbH u Co. KG, Osnabrück, Lübke u. Wiedemann, Stuttgart

(d) Samanid dinar of Nasr ibn Ahmad (913–943); the coins also bear the name of the caliph al-Muqtadir. Gold, 4.22 g. © Dr. Busso Peus Nachfolger

Illustration IX
The magical world of faraway islands



Alexander interrogates the *waqwaq* tree, whose fruit consists of human and animal heads. The tree reveals to him his approaching death in a faraway country. From the *Shāhnāhmeh* by Firdawsī (who died in 1020). MS Ouseley Add. 176, fol. 311b, Shiraz, c. 1430, Bodleian Library, Oxford. © Bodleian Library, University of Oxford

During the early period of Islam, the term *Waqwaq* referred to islands of Southeast Asia and to a region including Madagascar and the Mozambican coast. The myth of the *waqwaq* tree is mentioned for the first time in the Chinese book *Tongdian* written in 801 by Du Huan, who was taken prisoner at the Battle of Talas and who later sojourned in Baghdad.

Illustration x

India: state, religion, and trade



(a) Mukteshwar temple at Bhubaneswar (Orissa), founded during the late tenth century. © jyotsna dash



(b) Gold coins of Kumaragupta (415–455), 8.5 g. Obverse: “Victorious,” the king rides a horse (above) and an elephant (below). Reverse: Lakshmi, the goddess of prosperity and Vishnu’s wife, feeds a peacock (above) and holds a lotus (below). © Classical Numismatic Group, Inc.



(c) Shiva *nataraja*, Lord of the Dance. Chola dynasty, mid-tenth century, Tamil Nadu. In a cosmic circle of flames, Shiva tramples a dwarf, who symbolizes ignorance; the god’s dance generates both the destruction and the creation of the universe, symbolized by a flame in his upper left hand, and the drum he holds in his right hand, whose beats engender life. British Museum, OA 1969.12–16.1. © The Trustees of the British Museum, London

Illustration XI

Buddhism in South Asia and Southeast Asia



(a) Sasseruwa Buddha, not far from the more famous Aukana Buddha, northern Sri Lanka. H.: 12 m. Between the seventh and ninth centuries. © David Hiser

(b) Mountain temple of Borobudur, a representation of the Buddhist cosmology. Upper terrace, with 72 stupas; the stone bells with open design contain bodhisattvas. Kedu plain, Central Java. Built by the Sailendra dynasty, eighth–ninth century. © Marcel Malherbe laif/Redux



Illustration XII

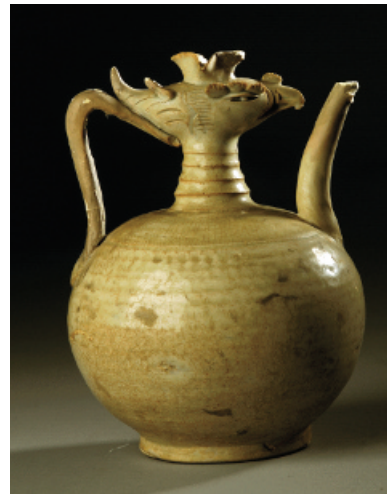
Insular Southeast Asia, an interface between China and India



(a) Stela from Telaga Batu, with an oath of loyalty written in Pallava script in two languages (Old Malay and a language related to Southeast Barito languages). The trough and slot were used to collect water poured on the stone. Palembang, state of Srīwijaya. H.: 155 x 143 cm. National Museum, Jakarta, D155. © National Museum, Jakarta, D. Harahap



(b) Gold plaque featuring Vishnu, 34.5 x 17.5 cm. Found near Wonosobo, central Java, ninth century. The headdress of the god reveals influences from South India. Vishnu holds a conch, a disc, and a mace. To his right, the god Garuda holding a snake. National Museum, Jakarta, A31/486a. © National Museum, Jakarta, D. Harahap



(c) Ewer with phoenix head, porcelain from China, ninth century, Maros, southern Sulawesi. H.: 19 cm. National Museum, Jakarta, no. 2693. © National Museum, Jakarta, D. Harahap

Illustration XIII

Departure of the Chinese princess Cai Wenji to the Xiongnu country



Departure of Princess Cai Wenji from China, after her abduction by Xiongnu at Luoyang in 194 CE. She was married to a Xiongnu chief for twelve years, but later returned to China following payment of a ransom. Illustration from the *Eighteen Songs of a Nomad Flute*, poems by Liu Shang (eighth century). Painted silk, ordered by Song Emperor Gaozong (1107–1187). Copy dated to the fourteenth century. Metropolitan Museum of Art, New York, 1973.120.3.

© Metropolitan Museum of Art, New York. Distr. RMN-Grand Palais

Illustration XIV
China: the working of silk



Ladies of the court preparing silk. Copy of a painting attributed to Zhang Xuan (eighth century?), possibly during the reign of Emperor Huizong (twelfth century). Ink and painting on silk, 37 x 147 cm, Museum of Fine Arts, Boston. © Museum of Fine Arts, Boston

Illustration xv

Cultural exchanges between China and western Asia (tenth to fourteenth century) (1)



(a) Ewer, blue-and-white porcelain, incorporating cobalt imported from Iran. China, *c.* 1340, Musée Guimet MA5657.
© RMN-Grand Palais, Jean-Yves and Nicolas Dubois



(b) Reticulated ewer with rooster-shaped spout, Iran, thirteenth century. This shape was inspired by Chinese ceramics. The body was produced using a double-shell technique. It depicts the *wagwag* tree, whose fruit consists of human and animal heads. H.: 65 cm, diam.: 40 cm, Musée du Louvre, MAO442. © RMN-Grand Palais, les frères Chuzeville

Illustration XVI

Cultural exchanges between China and western Asia (tenth to fourteenth century) (2)

(a) Footed bowl, enamelled glass, found in China. Origin: Syria or Egypt. It bears the Arabic inscription *al-'alim*, "the scholar," a title often used for Mamluk sultans. Early fourteenth century. H.: 29.3 cm. British Museum. © The Trustees of the British Museum



(b) Chinese plate, Yuan period (mid-fourteenth century), porcelain; in the center, *qilin* and pheasant; above and below, two phoenix. Turkey. Diam.: 41.5 cm. © Topkapi Sarayı Müzesi, İstanbul, 15/7035

Illustration xvii

Cultural exchanges between China and the Indian Ocean (tenth to fourteenth century)



(a) Plate with fish swimming, reflecting Chinese influence. Western Asia, c. 1280. Musée du Louvre, OA 6456. © RMN-Grand Palais, Hervé Lewandowski



(b) Small plate, celadon "Twin Fish." Diam.: 12.8 cm. Madagascar, cemetery at Vohemar. Musée du quai Branly 71.1965.4.110. © Musée du quai Branly – Jacques Chirac, Dist. RMN-Grand Palais



(c) Fragment of a plate. Longquan celadon "Twin Fish." China, fourteenth century. Sèvres, Musée national de la Céramique. © RMN-Grand Palais, Martine Beck-Coppola

Illustration XVIII

Cultural exchanges between China and Europe (tenth to fourteenth century)



(a) Window from Chartres Cathedral depicting a reeling machine, the principle of which was imported from China into Europe via the Silk Roads. © Henri de Feraudy



(b) Motif of three hares chasing one another, on a tile in Chester Cathedral (Great Britain). © Chester Cathedral

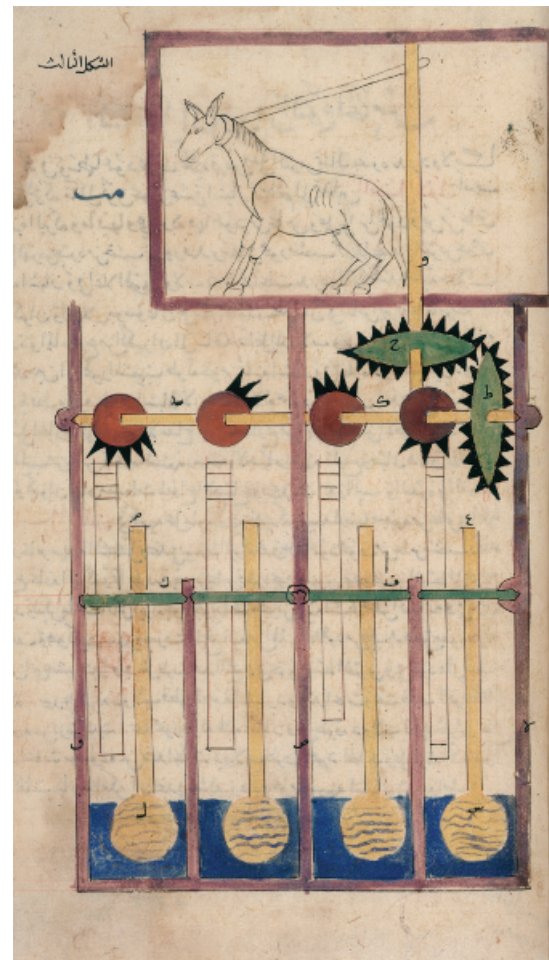
This motif, of Chinese inspiration, is known from paintings in the Dunhuang Caves (Central Asia). Its presence in several churches in Devon reflects influences arriving via the Silk Roads during the thirteenth century, or earlier, via the import of Chinese silk. This motif has been observed on certain objects from Iran, and is seen in churches in France and Germany.

Illustration XIX

Science and techniques in the Muslim world (tenth to fourteenth century)



(a) Astrolabe, Iraq, c. 1241. Bronze, inlaid with silver and copper. Astrolabes were primarily used to determine prayer times and the direction of the Holy City of Mecca. This astrolabe shows the signs of the Zodiac and other constellations, depicted as images. British Museum, OA 1855.7-9.1. The Muslim world developed various types of astrolabes, based on knowledge inherited from the Greeks. © The Trustees of the British Museum



(b) Al-Jazari's second water-raising device (1136-1206). MS Greaves 27 fol. 99, Bodleian Library, Oxford. The equid on the tourniquet activates four hollow-handled, spoon-shaped scoops. This is a quadrupled version of al-Jazari's first machine, showing segmental gears. Al-Jazari's *Book of Knowledge of Ingenious Mechanical Devices* contains drawings of five water-raising devices (see al-Hassan and Hill 1991: 42). © The Bodleian Libraries, University of Oxford

Illustration xx

Islam and the mapping of the world (tenth to fourteenth century) (1)

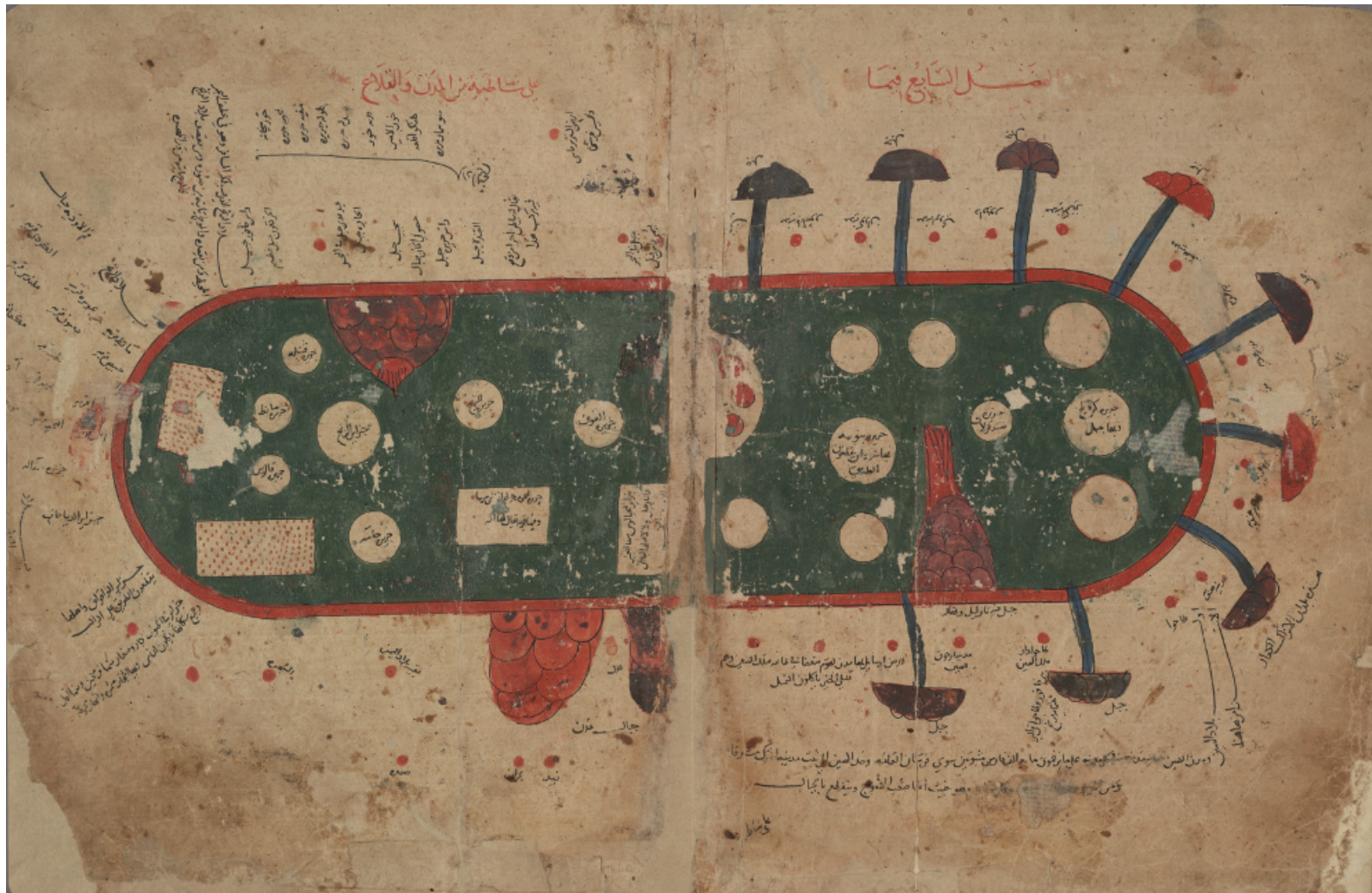


Map of the world, from the *Book of Curiosities*, written between 1020 and 1050, Bodleian Library, Oxford MS Ar. c. 90, fols. 27b–28a (twelfth–thirteenth century). © The Bodleian Libraries, University of Oxford

The map is oriented with the south topmost. On the left, the Indian Ocean is drawn as a closed sea, except in the east. On the map's southern edge, from left to right, we see the Waqwaq country, here facing the island of Java, and Sofala (further west), facing Sri Lanka. Along the northern shore of the ocean, we see China, and India on the right (see Edson and Savage-Smith 2004: 83). Al-Idrīsī's map of the world borrows from this cartographic tradition.

Illustration XXI

Islam and the mapping of the world (tenth to fourteenth century) (2)



Manuscript MS Ar. c. 90, fols. 29b–30a, a representation of the Indian Ocean as a closed sea. In the middle of the ocean is the island of Sri Lanka. On the left is Sofala, and below, the Waqwaq Islands. In the ocean, we see the “islands of the Zanj,” or Zanzibar. Along the lower coast is Yemen, showing the city of Aden. Along the upper coast, from left to right, we see the “Land of the Zanj,” Ras Hafun, and the “Land of the Barbarians” (Somalia). India lies on the right along the upper coast; the “country of the Turks” is in the right corner along the lower coast; with China on its left, showing the city of Canton (see Edson and Savage-Smith 2004: 92–95). © The Bodleian Libraries, University of Oxford

Illustration xxii

Arts of the Muslim world (tenth to fourteenth century)



(a) "Pilgrim flask"; gold-painted and enameled glass, Syria, c. 1260. H.: 23 cm. The swirls surrounding the trilobed cartouche, terminating in human heads, may represent the *waqwaq* tree in Alexander's legend. On the left, one sees a horseman; above him, a man playing the harp. On the right, another horseman, and a young man holding a cup. British Museum OA 69.1–20.3. © The Trustees of the British Museum



(b) Roger II of Sicily's coronation robe. Manufactured in Fatimid Egypt, 1134. Two scenes show lions attacking dromedaries, on either side of a palm tree. © Kunsthistorisches Museum Wien

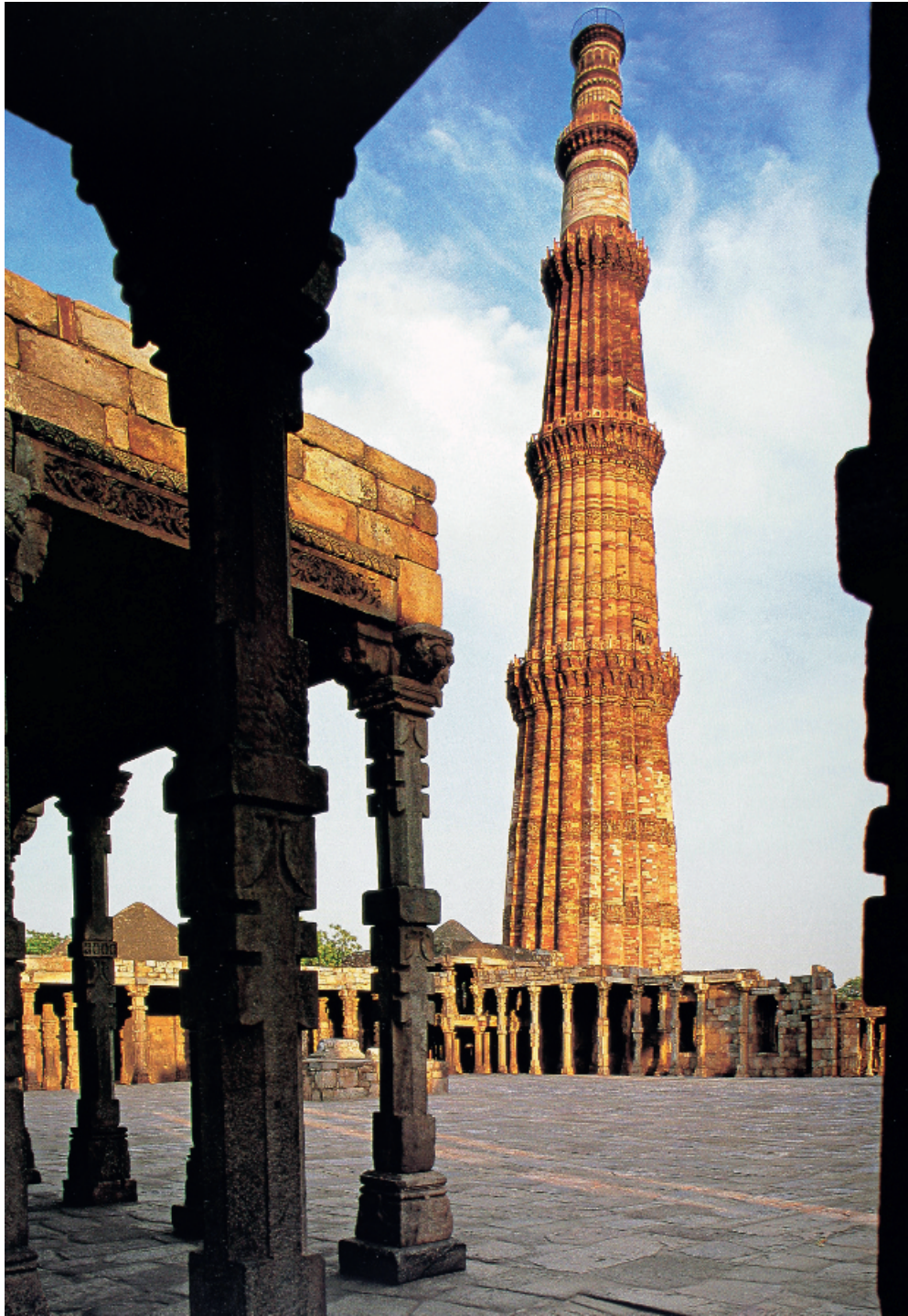
Illustration XXIII

Trade in the Indian Ocean (tenth to fourteenth century)



Merchants arrive at Hormuz on a ship carrying a camel and an elephant. Illustration in the *Devisement du monde* by Marco Polo, by the Master of the Mazarine, 1410. MS français 2810 fol. 14v, Bibliothèque Nationale de France.
© Bibliothèque Nationale de France

Illustration XXIV
India under the Delhi sultanate



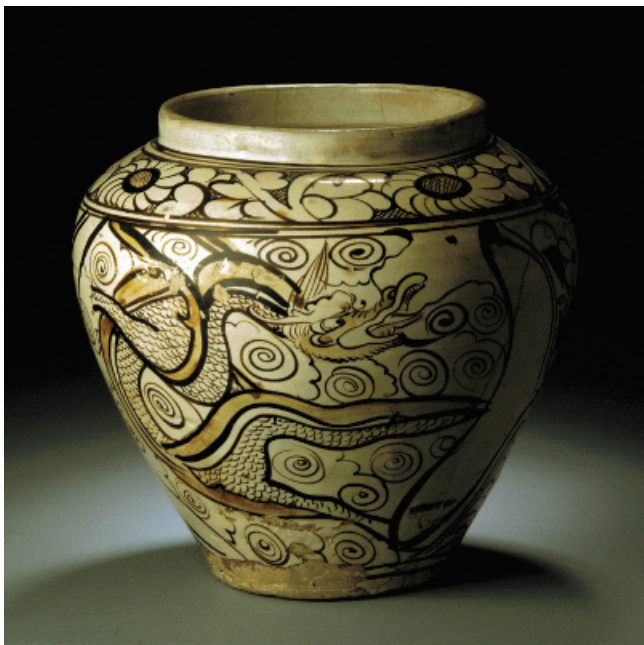
The Qūtb Minār was erected, starting in 1193, as a “Victory Tower” celebrating the new Islamic power in India. It is located within a complex including the Quwwat al-Islām mosque (Delhi); this mosque was built using stones from Hindu temples. Height: 72.5 m. © Massimo Borchì/Atlantide Phototravel

Illustration xxv

Insular Southeast Asia, between China and the Indian Ocean (1)



(a) Decorative embossed plaque. From Kediri, eastern Java, fourteenth–fifteenth century. It depicts an Indonesian version of an episode in the *Rāmāyana*. An army of monkeys builds a causeway across the ocean to the island where the demon-king Ravana lives. Two monkeys are frightened by a crab sent by Ravana to prevent them from finishing the work. H.: 12 cm. National Museum Jakarta, A110/6914. © National Museum Jakarta, D. Harahap



(b) Pot from northwestern China, found on Saleyer Island, southern Sulawesi, thirteenth century. H.: 27 cm. National Museum, Jakarta, no. 2407. © National Museum Jakarta, D. Harahap

Illustration xxvi

Insular Southeast Asia, between China and the Indian Ocean (2)



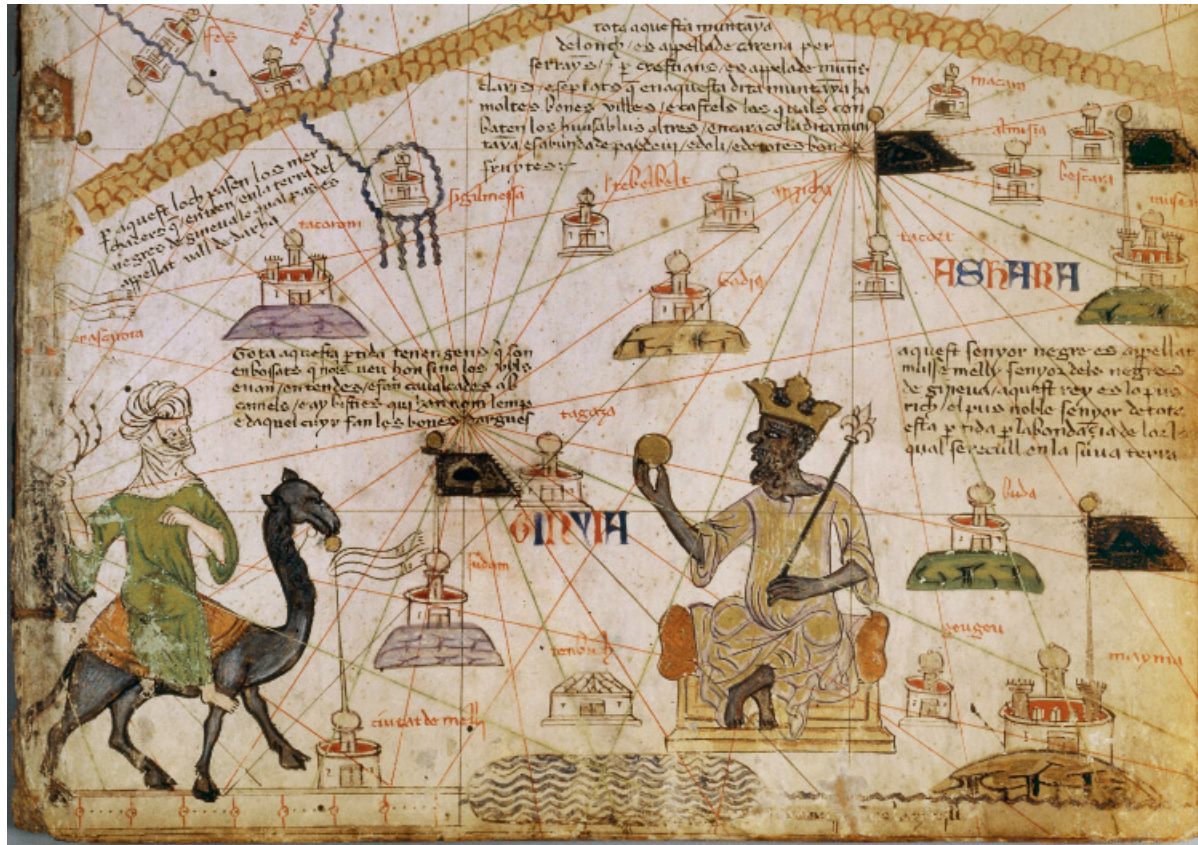
(a) Ceremonial lamp showing a mahout riding an elephant. The man bears Shiva's third eye on his forehead. The body of the animal is empty; it was used as an oil container. There is an opening on the back, with a hinged cover. Eastern Java, fourteenth–fifteenth century. 21 x 24 cm. Rijks Museum Amsterdam, MAK 268. © Rijks Museum, Amsterdam

(b) Vessel for holy water, bronze, fourteenth or fifteenth century. It depicts the Hindu myth of creation. The ovoid body of the container shows the primeval ocean. A lotus flower gives birth to a spike bearing thirteen superimposed parasols symbolizing Mount Meru. The spout's naga is the serpent Vasuki, which was used as a rope to churn the ocean. Found at Bataan, Bondowoso, eastern Java. H.: 40 cm. National Museum Jakarta, no. 6436. © National Museum Jakarta, D. Harahap



Illustration XXVII

African gold



(a) The king of Mali, Mansa Musa, holds a gold nugget in his hand. The section to the right translates as "Musa Mali, Lord of the Negroes of Guinea. So abundant is the gold which is found in his country that he is the richest and most noble king in all the land." Catalan Atlas by Abraham Cresques, 1375, pl. iii. © Bibliothèque Nationale de France



(b) Gold rhinoceros found in a royal grave at Mapungubwe. © University of Pretoria

Illustration xxviii

Glass beads in East Africa (tenth to fourteenth century)

(b)



(a)

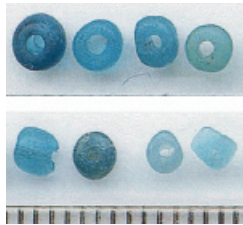


(c)



(a) above, right, Zhizo beads from Schroda, (b) above, left, and (c) below, Zhizo beads from Chibuene (Wood 2005; Ekblom 2004). The Zhizo beads, also known in Pemba, at Shanga, and probably in the Comoros, may have originated in the Persian Gulf (Robertshaw *et al.* 2006). Their glass used plant-ash soda.

(d)



(e)



(f)



Glass beads of the K2 type, using mineral soda. On the left, (d) small green-blue beads, also found at Kilwa, Sanje ya kati, Kisimani Mafia, Mahilaka, Chwaka, Kaole, and Shanga. They probably originated in India and/or Southeast Asia. On the right, (f) *garden rollers*, and in the center (e) a mold of the type used to manufacture them. (Wood 2005)



(g) Glass beads. Mapungubwe and Great Zimbabwe Oblate Series. Beads imported from India (Gujarat?) and perhaps from Southeast Asia (Robertshaw *et al.* 2006). (Wood 2005)

(h) Glass beads from Kilwa, of the "Indo-Pacific" type. They appeared in post-Zhizo assemblages. (Wood 2005)

Illustration XXIX

East Africa: Kilwa

(a)



The great mosque, Kilwa. The mosque was built by Sultan al-Hasan bin Sulaymān at the beginning of the fourteenth century, and rebuilt under Muhammad ibn Sulaymān's reign (1421–1442). (a) Exterior facade. © Heinz Ruther, African Cultural Heritage, Sites and Landscapes Database, University of Cape Town. (b) Interior. © John Warburton-Lee Photography / Alamy Stock Photo

(b)



Illustration xxx

Mahilaka (northwestern Madagascar): ceramics and beads (tenth to fourteenth century)

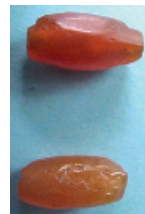


(a) Pottery with *Arca* shell imprints, found in the earliest levels at Mahilaka. This decoration may reflect an Austronesian influence. Musée d'Art et d'Archéologie, Antananarivo, photo: N. Martin



(b) Sgraffiato ware from the Persian Gulf, level Ib, Mahilaka, twelfth–thirteenth century. Musée d'Art et d'Archéologie, Antananarivo, photo: C. Radimilahy

(c)



(d)



(e)



(c) Carnelian Indian beads
(d) Gold beads and lamellae
(e) Various types of beads found at Mahilaka. Musée d'Art et d'Archéologie, photos: B. Rasoarifetra

Illustration xxxi

East coast of Madagascar: the working of chlorite schist (tenth to fifteenth century)



(a) Chlorite schist tripod pot. Excavations at Vohemar, 1941. Musée du quai Branly 71.1965.4.116.1-2. © Musée du quai Branly – Jacques Chirac, Dist. RMN-Grand Palais



(b) “Stone boar,” in chlorite schist, village of Ambohitsara, southeastern coast of Madagascar. The sculpture is hollow and may have been used to collect liquids. Photo: Ramilisonina, Musée d’Art et d’Archéologie, Antananarivo

Illustration xxxii

The Highlands and southern Madagascar: ceramics belonging to the tenth- to fourteenth-century period



(a) Fiekena pottery, decorated with triangular imprints filled with white pigment (Imerina). Centre d'Art et d'Archéologie, Antananarivo



(b) Ambohimananana (Imerina). Pottery decorated with triangular imprints inscribed within incised triangles



(c) Ceramic fragments from Maliovola, with red slip and graphited incised decoration (seen in the lower part of the image). Anosy, southeastern Madagascar. Excavations by J.-A. Rakotoarisoa, Musée d'Art et d'Archéologie, Antananarivo

was characterized by a shortage in precious metals, due to expenses incurred by the court and by military campaigns (a “gold famine” of short duration occurred once again during Saladin’s period, partly due to the expenses involved in wars against the Crusaders).¹³

Aside from revealing the networks’ extent (for western India, at least twelve ports are mentioned), the Geniza documents show their complexity. “All transactions were carried out by way of partnership, each party acting in a different locality, and dealing with imports and exports from one country to the other” (Gil 2003: 273). Trade networks often overlapped with familial ties. One example: Abū Zikrī Kohen Judah, who represented Cairo’s merchants, was married to a cousin of Madmūn, and had a sister who was Madmūn’s wife. Born in Sijilmāsa, Abū Zikrī Kohen Judah traveled to India regularly for long periods, while maintaining links with Morocco.¹⁴ As for Madmūn, he stored his own merchandise in his warehouse along with goods belonging to other merchants; he bought and sold for foreign traders, and acted as a banker. A letter from a Jewish merchant, Ishāq b. Makhlūf, thus mentions sending bales of textiles to Aden, for storage in Madmūn’s warehouse. Madmūn was supposed to sell these bales when the price became favorable (Margariti 2007: 195). Merchants usually had employees as well as agents who conducted business for them: an Indian servant of Abraham ben Yijū acted as his agent at Aden (Goitein and Friedman 2007: 66).

The story of the Jewish merchant Lebdi, retrieved from the Geniza documents, reflects this complexity in trade ventures as well as the legal problems that could arise.¹⁵ In southern Tunisia, a rabbi entrusted Lebdi with coral destined for sale in India; Lebdi also bought coral on his own account. In Cairo, the representative of the Jewish merchants gave Lebdi textiles, silver and copper vessels, remedies (escamonie and *Styrax* resin), twenty gold dinars, and money to pay customs duties and expenses incurred by caravans bound from Qūs (in Upper Egypt) to the port of ‘Aydḥāb. Half of this load ought to have been given to the *wakil* of Aden, Hasan ben Bundar (father of the future *wakil* Madmūn), who wanted to buy pepper in Malabar for an equivalent value. The other half should have gone with Lebdi to Anahilavāda, north of Bombay, to be

century (Ashtor 1971: 17). Strangely, Ashtor totally ignores the importance of Zimbabwean gold in the western Asian economy. For J. L. Bacharach, “the source for gold bullion is uncertain” after 1070 (1983: 161). It was during this period that Islam truly spread into the ruling classes of West Africa.

The islamization of the Ghāna Empire, which emerged during the eighth century, however, occurred prior to the Almoravid intervention, in 1076 (Hrbek and El Fasi 1997: 82).

¹³ This gold famine has been emphasized by al-Maqrīzī, whose 1415 book was the first to deal with Egypt’s monetary and numismatic history (Ashtor 1971: 29; Bacharach 1983: 162ff). During the Fatimid period, only small amounts of silver arrived in Egypt: from Spain, Central Asia, or Anatolia, via Syria (Syria was lost by the Fatimids in 1070). Fatimid dirhams are rare. Under Saladin’s reign, in contrast, silver imports from Syria increased: prices were now listed in silver dirhams, no longer in gold dinars. In addition, one observes “the use of glass *jetons* in the exact shape and style of gold dinars in Ayubbid Cairo” (Goldberg 1999: 6).

¹⁴ This is nothing unusual. Halfon ha-Levi, originating in Damietta, also conducted business between Spain and India.

¹⁵ Goitein 1954a: 191ff. Lebdi evokes the image of these maritime “peddlers,” linked by contract to great patrons. F. Braudel (1979, II: 100–101) has shown the significant role of these patrons during the seventeenth century (see the exemplary profile of the Armenian merchant Hovhannès, who traded in Persia, India, and Tibet).

exchanged for lacquer. Lebdi's voyage strayed quite a bit from the plan. From 'Aydhab, he sailed to Dahlak, where he sold the textiles and part of the remedies, because he judged that the prices there were favorable. Then he turned over the proceeds to the *wakil* of Aden. Later, he traveled to Tiz – with Ibn Bundar's brothers¹⁶ – and arrived at Anahilavāda, where he traded on behalf of his Tunisian and Egyptian clients, the *wakil* of Aden, and himself. Acquisitions for the *wakil* were made using Lebdi's own assets. It happened that two ships were lost on the return voyage; one was loaded with silk, the other with steel. Contrary to the orders given by the representative of the Cairo merchants, Lebdi did not sell his coral in order to acquire lacquer, instead, he exchanged the coral for pearls, most of which were then lost at sea. An endless trial ensued. Because Lebdi had failed to carry out the instructions given him by the representative of the Cairo merchants, he could have been held liable for losses.¹⁷

A trader and shipowner often placed his merchandise on a separate vessel, on which he might travel occasionally, renting a "cabin" (*bili*),¹⁸ or space limited by mats. For example, while Mahrūz, a Jewish merchant living in Aden, owned a ship which sailed between Aden and Mangalore, he also traveled on other ships (note that each ship had its port of destination and, usually, kept to its route) (Goitein and Friedman 2007: 24, 49). The Tunisian Jewish trader Abraham ben Yijū, who lived in Mangalore from 1132 to 1149, lost a load he had placed on a ship belonging to the great merchant Rāmish;¹⁹ some of the merchandise, however, had also been loaded onto other ships: it was customary to divide merchandise among several ships, in order to limit risks.

The interfaith character of some networks or enterprises was remarkable. Trade partnerships occurred not only among Jewish merchants exclusively, but also, at times, among merchants and the political elites. Thus, Madmūn and the Yemeni Bilāl ben Jarīr, commander of the troops of the sultan in Aden, developed a trade partnership with Egypt (Margariti 2007: 155), and together they owned a ship which sailed between Aden and Sri Lanka²⁰ (a Muslim merchant, Bilāl ben Jarīr became a general and governor of Aden, "a transition natural in medieval mercantile nations, such as those of the Arabs and Italians" [Goitein 1973: 181]). Madmūn appears to have held responsibility for the building of warships (certainly destined for the state). In addition, he built a ship of his own in Aden (Margariti 2007: 159). Among Madmūn's friends, with whom he conducted business, were a Nestorian Christian and many Muslims. Madmūn also describes people bearing Hindu

¹⁶ No trader ever traveled alone; he was always accompanied by fellow-believers.

¹⁷ Lebdi suggested that the *wakil* of Cairo take whatever he wanted from the merchandise brought from India, and promised to give three flasks of musk to the Tunisian merchant, in exchange for his coral. In exchange for merchandise or money that had been entrusted to him, a trader was expected, in principle, to return its equivalent plus two-thirds of the profits made (except in the event of a shipwreck). On the various types of contract between capitalists/managers, see Goitein 1967: 176–177.

¹⁸ Goitein (1971: 315) relates this term to the Malay (*bilek*).

¹⁹ Goitein 1973: 193. Abraham ben Yijū was informed by Aden that two of Rāmish's ships had been lost. Rāmish appears to have been the owner of several vessels trading with India (Chakravarti 2002a: 53–54).

²⁰ Some insolvent Jewish merchants chose to flee India to take refuge in Sri Lanka; this may explain why Madmūn opened this direct shipping line from Aden to Sri Lanka, in order to control the island's Jewish community (Goitein 1954a: 151). An excommunication letter was sent from Aden to India, targeting a Jewish merchant who had fled to Sri Lanka (Goitein 1971: 331).

names as “brothers and friends.” In a letter, Madmūn informs ben Yijū that he has had mats sent from Berbera, as well as two assortments of high-quality paper, sugar, and raisins through the deacon ‘Abd al-Masīḥ (probably a Nestorian Christian living in India and acting as agent for the two Jewish merchants). A man called Abu’l-Khair, a cousin of ben Yijū, asks him to send iron, which was lacking in Aden, as well as the cardamom still in his possession; on the reverse of this letter, Madmūn writes a message destined for Indian merchants (Sūs Sītī and Kinbatī) and for Ishāq “the Banyan,” giving them the prices of pepper and iron in Aden. He advises them to send a ship from Mangalore to Diu, loaded with pepper, iron, cubeb, ginger, coir, and aloeswood, “because all these goods sell well” (before sending goods, merchants always tried to determine market prices and even forecast price trends) (Goitein and Friedman 2007: 59). Madmūn also suggested that these Indian merchants take part in sending a ship to Aden, and offered to send them gold, sugar, raisins, “and other goods.” A second letter from Madmūn to ben Yijū, translated by Goitein (1980), is even more enlightening for its understanding of how the networks functioned. Amounts of sales and purchases as well as the cost of each operation conducted were carefully recorded. This letter informs ben Yijū that his load of pepper has arrived on a ship owned by the Persian Rāmisht, and gives the price obtained. It also states that a load of iron sent by ben Yijū on a vessel belonging to ben Abu’l-Katā’ib (a Muslim) through a Banyan has also arrived. After deducting various expenses (taxes, carrying costs, baskets, and so forth), the proceeds from the sale were used to buy copper, dates, a carpet, mats from Berbera, clothes from Spain and Egypt, and lead, to which were added 20 Egyptian *mithqāl* and 7 Malikī dinars. The merchandise was transported on three or four different ships, belonging to Rāmisht, al-Muqaddam (the official title of the chief of a Jewish community), and Nambiyar(ani?) (an Indian?). Via the ship’s captain, Abū Ghālib, to whom the purse containing the dinars had been entrusted, Madmūn sent four more boxes made of “brazilwood” containing sugar and raisins, as well as “three assortments of Egyptian paper of the best quality.” It appears that Muslim qadis traded with and for Jews (in general, it is obvious that religious dignitaries were also involved in commercial activities: qadis often acted as representatives, according to the Geniza papers).²¹ As Goitein observes, “the pertinent division was less in terms of religion and nationality than in terms of warrior leaders and merchant entrepreneurs.”²² M. Lombard also notes: “The interfaith character of the guilds was fundamentally different from the situation obtaining with the West. It reminds us that the East was synonymous with cosmopolitanism, openness, mixing and syncretism, whereas the West was endogamous and closed,”²³

²¹ Goitein 1954a: 191. A qadi is a Muslim judge dedicated to civil, judicial, and religious functions.

²² Goitein 1954a: 197. As an example of a joint venture which appears to have involved many people, Goitein (1954a) cites the case of a vessel whose cargo was apportioned between communities: pepper and “brazilwood” for the Muslims, and lacquer and gold for the Jews. Each community, however, lived in its own separate quarter. S. Y. Labib (1969: 84) emphasizes that between the tenth and twelfth centuries in Egypt (we observe the same situation in Iraq and in Iran), rich Jewish families were engaged in long-distance trade, banking, and tax collection, sometimes for entire provinces.

²³ Lombard 1980: 175. “In the eastern guilds, Jews, Christians and Muslims were admitted on equal terms; and even, in some guilds, the non-Muslims were the majority, especially among jewelers, traders in precious metals and bankers. The Jews played a considerable role in the banking system. Most of the physicians were Christians or Jews” (Lombard 1980: 175–176).

an excessive statement which underestimates the changes at work in Europe from the thirteenth century onward.²⁴

As S. Digby (1982c) correctly states, data from the Geniza letters linked to Jewish merchants certainly do not reflect trade between India and Egypt in its entirety: the Muslim – and probably Hindu – networks were surely more extensive than what we perceive through these documents. Beyond India, Muslim networks extended as far as China. Imported Chinese ceramics appeared increasingly in Egypt from 1000 onward, as did their imitations (Scanlon 1970: 85ff.). A testimony by al-Gharnātī sheds light on the composition of these networks, and on the ways in which they became “localized” and increasingly complex: “[He] speaks of Abū-l-Abbās, whom he met in Cairo in 1118 after the latter had spent forty years in China. The children he got from slave concubines in China, India, Sri Lanka, and Abyssinia spoke the languages of these countries and acted as his agents. Despite losses incurred at sea, Abū-l-Abbās was immensely rich and respected; he took care of various foundations” (Rosenberger 2000a: 251). Documents indicate the extreme wealth of some Egyptian merchants, for example Mubarak al-Anmatī, a man of Iraqi origin, who left a fortune estimated at 300,000 dinars when he died in 1026 (Rosenberger 2000a: 262). The benefits obtained from long-distance trade were considerable. Between India and Aden, writes Madmūn in a letter dated to 1134, “novices realized 200 dinars on an investment of 100, while an experienced trader realized 250 [dinars]” (Goitein and Friedman 2007: 164).

In addition, networks extended into the African interior. Via the kingdoms of Makuria and Alwa, which housed quarters of Muslim merchants, slaves came from various regions such as Kanem and the Upper Nile. The Fatimid caliph Al-Mustansir (1035–1094) employed 30,000 black soldiers; Berber mercenaries formed cavalry units, and “Sudanese” and “Nubian” slaves made up the infantry (Alexander 2001: 50). Black slaves also worked in the mines of the Wadi Allaqi. Moreover, Jews were active along the trans-Saharan trade routes: while they operated between Sijilmāsa and the Mediterranean, Ibadis traveled between Sijilmāsa and the Sahel. However, “this complementarity disappeared when Sunni orthodoxy progressed from the eleventh century onward”: Sijilmāsa was taken by the Almoravids in the middle of the eleventh century and later by the Almohads during the twelfth century (Fauvelle-Aymar 2013: 150). There were still Jewish merchants at Sijilmāsa, however, since “the king of Aragon James I had invited them to settle in the Balearic Islands and in Catalonia” (Fauvelle-Aymar 2013: 250).²⁵

The Fatimid power appears to have declined as of 1070, when the Seljukids took control of Syria. Mecca now submitted to the new Seljukid power. Egypt also lost its suzerainty over Yemen. It was against this backdrop that a military man of Armenian origin, Badr al-Jamālī, took up the position of vizier in 1073; this position would remain under the control of an army chief until the end of the Fatimids’ reign.

While Egypt’s situation improved under the governorate of al-Jamālī, at the end of the eleventh century, the First Crusade (1096–1099) led to the creation of the Christian kingdom of Jerusalem, with access to the Red Sea. This weakened the Fatimid power,

²⁴ Islam did not permit the emergence of true guilds such as those which developed in Europe from the thirteenth century onward (Kuran 2005).

²⁵ On Jewish communities and the trans-Saharan trade, see Abitbol 1981.

which was also threatened by Bedouin revolts and ethnic rivalries in the army following the assassination of the vizier al-Afdal in 1121. Crusaders and Muslims then fought each other for control of Egypt.

Ayyūbid Egypt

In 1169, a Syrian army entered Egypt, and in 1171, Saladin, appointed as vizier in Cairo by the emir of Aleppo, put an end to the Fatimid reign. In 1174, Saladin attacked Syria, and in 1176 was acknowledged as Sultan of Egypt and the Levant, under the nominal suzerainty of the Abbasid caliphs. The Christians remained a threat in the Red Sea: Renaud de Châtillon built seven galleons near Eilat and in 1183 conducted raids as far as Aden. Saladin then launched an attack against the Christian kingdom (1187), took Jerusalem, and had Renaud executed, thus putting an end to Christian aims in the Red Sea. But Saladin, aware of the advantages of having commercial relations with the Europeans, and the Italian cities (Venice, Genoa, and Pisa) maintained trade with Egypt. Egypt's international importance made it the target of the Fifth and Eighth Crusades, in 1219 and 1249, conducted on the town of Damietta; these Crusades failed to take Cairo (the king of France Louis IX was made prisoner in 1250).

In his *A History of Deeds Done Beyond the Sea*, Archbishop William of Tyre (c. 1185) points out the significance of both Alexandria and the Red Sea:

If there is anything which the country itself lacks, it is brought by ships [to Alexandria] from the lands across the sea in profuse abundance . . . Whatever our part of the world lacks in the matter of spices, pearls, Oriental treasures, and foreign wares is brought hither from the two Indies, Saba, Arabia, and both the Ethiopias, Persia and other lands nearby. All this merchandise is conveyed to Upper Egypt, by way of the Red Sea, which forms the route from those races to us. Are unloaded at the city of Aidab [‘Aydḥāb], on the shore of that same sea . . ., aromatics, pearls, the treasures of the Orient, and all the foreign goods of which our world is lacking: when they arrive at this place, one carries them to the Nile, and they travel downriver to Alexandria. That is why the peoples from the Orient and those from the Occident meet continuously in this city, which is the great market of these two worlds. (Capdepuuy 2010: 50)

Ayyūbid Egypt inherited the long-distance exchange networks built up during the Fatimid period. Muslim networks developed in the Horn of Africa, where Ethiopia, under the Zagwe dynasty (early eleventh century – 1270),²⁶ maintained a relatively prosperous Christian kingdom, controlling part of Eritrea. Its king Lalibela reacted to Saladin's capture of Jerusalem by creating his capital, Roha, as a “new Jerusalem.”²⁷ The symbolism of the entire building complex emphasized the status of the Zagwe “as the true heirs of Christian Aksum” (Phillipson 2012: 238). Roha would later take the king's name and become a center for pilgrimage.²⁸ The importance of the Red Sea increased between the twelfth and fourteenth centuries, due to conflicts with the Crusaders and later, the Mongol invasions; the pillage of Baghdad by Hülāgū's troops

²⁶ For a discussion on the chronology of this dynasty, see Phillipson 2012: 228.

²⁷ The site is much older than Lalibela's reign (see Phillipson 2012: 229ff.).

²⁸ “The use of Lalibela as a toponym is not attested until the sixteenth or seventeenth century” (Phillipson 2012: 227).

in 1258, in particular, led to a shift in the market for luxury goods toward Egypt.²⁹ In 1173, the Ayyūbids intervened in Yemen in order to put an end to political unrest, and the Ayyūbid governor rebuilt and reorganized the port of Aden. The Jews and the Coptic Christians each played a diminishing role during the thirteenth century, perhaps due to restrictions on non-Muslims: Muslim merchants, *kārimī*³⁰ and other traders, in contact with Yemen and Gujarat, now dominated trade in the Indian Ocean. The name *kārimī* derives from the term *kārim*: during the twelfth century, it referred to a maritime convoy between Egypt and Yemen which protected ships against pirates, and facilitated negotiations with the various local political powers.³¹ The primary origin of the word, however, is still debated.³² The term *kārim* has several meanings, and the expression *tujjār al-kārim* should be translated as “merchants of the *kārim*,” not “*kārimī*” (Vallet 2010b: 478). “In the Rasūlid almanacs, the term *kārim* is [also] associated with a trading season at Aden, primarily a navigation season” (Vallet 2010b: 479). The significance of the *kārimī* goes back to the Fāṭimid period, when an Egyptian fleet was based at ‘Aydḥāb to protect its merchants from pirate attacks.³³ During the Ayyūbid period, some *kārimī* arrived from Iraq: these were Sunni merchants, who had left for Egypt when Saladin took power (Garcin 2000).³⁴

Saladin lent increasing support to the trade of the *kārimī*, which was a source of revenues via the state taxes they paid.³⁵ According to al-Maqrīzī, Saladin was the first to institute *zakāt* taxes on merchandise, amounting to 2.5 percent, to be paid within one year from the date of acquisition of taxable merchandise. Abuses were reported, however. Al-Maqrīzī writes that in 1181, a group of *kārimī* merchants arriving from Aden were forced to pay the *zakāt* for a period of four years. Ibn Jubayr denounced the imposition of the *zakāt* in 1183 on pilgrims returning from Mecca with goods (Rabie

²⁹ Rougeulle 1996: 167ff. Hülāgū, however, attempted to restore the economy in western Asia. He appointed a Muslim from Khorasan as governor of Baghdad, and had a canal dug along the Euphrates River in order to enhance agriculture. A brother of the governor of Baghdad was appointed as First Minister of the khānate in 1262.

³⁰ Were they really all Muslims? In contrast to Labib, E. Ashtor (1956) puts forward the idea that Copts and Jews were present until the fourteenth century (see Vallet 2010b: 473). Moreover, their origin was quite diverse: they hailed from Egypt, Syria, Iraq, Anatolia, and Persia.

³¹ Goitein 1966: 358; Chaudhuri 1985: 59. The Ayyūbid rulers also organized protection for merchant ships.

³² The term appears in a text which is probably old; it was transmitted by al-Qalqashandī, who wrote that the Fatimids organized a fleet of three to five ships to protect the *kārimī* from pirates during their voyages between ‘Aydḥāb and Sawākin (Vallet 2006: 413). F. J. Apellaniz (2009: 55) suggests a link with the ancient Semitic term *kar*, “quay, port” (see Volume 1, on the *tamkāru* merchants). See also Labib 1978: 666. The *kārimī* were primarily involved in Red Sea trade.

³³ Goitein 1966: 351. The situation in ‘Aydḥāb was clearly linked to Mecca and the pilgrimage (see Ibn Jubayr, during the twelfth century; Pearson 2003: 31). During the fourteenth and fifteenth centuries in the Mediterranean, Venice placed its armed state ships at the disposal of merchant convoys – in return for payment.

³⁴ As Garcin (2000) points out, these *kārimī* made better articulation possible between the Mediterranean Sea and the Indian Ocean than the Baghdadi networks had provided during the eleventh and twelfth centuries.

³⁵ The documents known to us on Ayyūbid Yemen reveal this dynasty’s close control over trade in Aden. All the merchandise arriving in the port was weighed and taxed (except food, rice, wheat or sesame, and some goods such as “našam wood” from India) (Smith 1995: 129–130, 133). The Rasūlids would secure more favorable treatment for merchants (see below).

1972: 97–98). According to Ibn Mammātī, a tax called *khums* (“one-fifth”), of Fatimid origin, was levied on foreign merchants upon the sale of merchandise (Rabie 1972: 90). Moreover, during the Ayyūbid period and later the Mamluk period, the state’s institution of the *matjar* continued buying and selling goods (see testimonies by Makhzumī, Ibn Mammātī, and Nābulī, the latter denouncing the system’s inefficiency) (cf. al-Maqrīzī) (Rabie 1972: 93–94). The building of an entrepôt by the *kārimī* at Fuṣṭāṭ appears to go back as early as 1183. Saladin’s victory over Renaud de Châtillon removed the threat posed by Crusaders in the Red Sea.³⁶ According to Arab sources, the first *kārimī* who arrived at Aden was a textile merchant from Alexandria; he was also a man of religion. This occurred during the second half of the eleventh century,³⁷ a time when traffic via Qūs was growing apace (Garcin 1976). During the ensuing centuries, *kārimī funduq* would be found in Cairo, Alexandria, Qūs, in Egypt, at Aden, Ta’iz, Zabīd, Ghulāfiqa and Bi’r ar-Rubāhiyya, in Yemen, and at Mecca, Medina, and Jeddah, in Hijāz. The *kārimī* conducted trade between Egypt and Yemen, where they bought products from the Orient from Indian or Yemeni merchants; other merchants traveled to West Africa. While these sources show a segmentation of Egypt/Aden/India routes, Rasūlid documents also mention *kārimī* merchants traveling to China (Margariti 2007: 153), and Indians trading as far as ‘Aydhab, according to Ibn Jubayr: “[‘Aydhab] is one of the ports most visited in the world, Indian and Yemeni sailors stop there, to say nothing of the ships of the pilgrims who come and go [between Jeddah and the African coast]” (Charles-Dominique 1995: 102). Note that merchants of the *kārimī* did not travel to East Africa. The way the *kārimī* were organized is still debated, but the documents do not indicate the existence of a true guild. There were changes in the networks during the twelfth century, and changes also in some of the products transported: now Yemen was exporting madder and horses; these had never been mentioned previously in the Geniza letters (Vallet 2006: 493).³⁸

Egypt during the Mamluk Period

After their triumph over the Crusaders of Louis IX, the corps of mamluks of Turkish origin, on whom Egypt’s power relied, overthrew the Ayyūbids in 1250. Following his victory at ‘Ayn Jālūt over the Mongols, in 1260, a Mamluk called Baybars I (1260–1277) was acknowledged as sultan, with the approval of the Abbasid caliph, who had fled from Baghdad.³⁹ In Egypt and elsewhere in the Muslim world, the model of the sultanate became predominant: a military state ruled by groups of foreign – often servile – origin. Funding of the ruling groups relied upon the *iqtā’* system, in which “part of the land taxes from one or several localities was given to the sultan and the

³⁶ Saladin’s reign was marked by new technological developments in the military sphere. The Muslim world benefited from transfers from China (such as knowledge about gunpowder), and also from various innovations.

³⁷ Serjeant 2000: 62. At this time, Benjamin of Tudela described activity in Alexandria: “it is a commercial market for all nations. Merchants of India bring thither all kinds of spices” (quoted by Adshead 1995: 137).

³⁸ Madder (*Rubia tinctorum* L.) is mentioned by Ibn al-Mujawir as an imported product: it was probably used in a local textile industry (Margariti 2007: 245 n.148). Its cultivation would later develop in Yemen.

³⁹ During the late thirteenth century, in contrast, the Mamluks were usually of Circassian origin (a term derived from the northern foothills of the Caucasus).

emirs, in money or in kind” (Garcin 1995b: 343, 349): the *iqṭāʿ* was an instrument for transferring agricultural surpluses toward the ruling class and the soldiery, thus promoting urban growth. “The emirs’ share was proportional to the number of mamluks whom they were required to present to the sultan before he left for war.” There was no transmission of the *iqṭāʿ* by inheritance: one thus avoided the formation of a feudal nobility. This rule, however, could be circumvented by pious donations (called *waqf*) and their management. The Mamluks relied upon a cumbersome administration, with each head of government department “assisted by a military man” (Bianquis 2000: 80). Much of the bureaucracy was of Coptic origin. The sultan’s eunuchs were responsible for educating the Mamluks and for overseeing the treasury (Anheim 2009). Moreover, a system of staging posts was set up, inspired by the Mongol postal system: “the Mongol enemy was also a model,” at times copied even in court rituals (Haarmann 1993).

Baybars eliminated most of the holdings of the Crusaders along the Mediterranean coast, and conquered the Ismailis from Syria, now an Egyptian province. Twice, Baybars occupied the kingdom of Little Armenia, through which “the western trade could obtain access to products from the Orient brought via the Mongol routes” as well as access to slaves from the Russian steppes (Garcin 1995b: 353).⁴⁰ These conquests permitted an inflow of silver from Central Asia into Egypt, where Baybars issued new dirhams (Bacharach 1983: 165). Baybars also took advantage of the conversion to Islam of Berke, Mongol ruler of the Golden Horde, to sign a treaty of alliance with him in 1262, against Hülāgū. This treaty eased relations between the Black Sea and Egypt, and expedited the sending of Turkish-speaking slaves to Egypt. In the south, Baybars also expanded Egypt’s influence by conquering the Nubian kingdom of Makuria.

Egypt enjoyed a period of overall growth under Baybars and his successors. The state improved its road network and irrigation systems (in addition, part of the second half of the thirteenth century saw a phase of higher Nile flooding), and encouraged the activities of the *kārimī*. There were 200 *kārimī*, under Sultan al-Mālik al-Manṣūr Qalāwūn (1280–1290), “and the number of their slaves who traveled to trade for them . . . may have been more than a hundred” (Ibn Ḥajar, quoted by Vallet 2006: 434). After a decrease in merchant activity during the mid-thirteenth century, trade once again grew under the reign of the Mamluks; at the same time, their politico-religious aura increased in the Muslim world (it is significant that Merah Silu, in Pasai, adopted the title Malik al-Šāliḥ, the name of an Ayyūbid ruler who had reconquered Jerusalem in 1244, and gave his children the names of the Egyptian Mamluks: Malik al-Zāhir and Malik al-Manṣūr). The Mongol invasion of Iraq gave the Red Sea greater importance, reflected by the arrival of merchants from Persia, Iraq, and Syria (Vallet 2006: 432–433). A governmental edict in May 1288 illustrates the implementation of a policy improving trading conditions:

We extend this invitation to illustrious figures, great merchants desirous of profits, or small retailers . . . Whoever arrives in our country will be able to remain, or come and go as he pleases . . . It is truly a garden of Paradise for those who reside there . . . A divine blessing is

⁴⁰ The slave trade with Mongols from Russia, however, was mainly conducted via the straits, thus avoiding Anatolia (Rosenberger 2000b: 117).

assured for the journey of any man who inspires charity by borrowing or who accomplishes a good deed by lending. (quoted in Braudel 2002, 11: 558)

Merchandise from India transited through Yemen and was carried to Hijāz and Syria, and more importantly – via the port of ‘Aydḥāb – toward Cairo, Alexandria, and Damietta, where Frankish merchants came to trade. Taxes were fairly heavy, reaching 19 percent of the value of merchandise imported at Alexandria, according to al-Makhzumī, who supervised the administration of the tax office (Vallet 2010b: 195). Export taxes were sometimes even higher (Margariti 2007: 113). Taxes were imposed on value, not on the nature of the merchandise, a system which tended to favor the merchants, since it took price fluctuations into account (Margariti 2007). The merchants’ religion played no role in the amount of taxes paid. Agreements were “established with the Catalans” and renewed with the Venetians and the Genoese – who had supplied the first contingents of Mamluks (Garcin 1995b: 355). At times, the administration intervened directly in trade at Alexandria, for example “through the forced sale of alum to Mediterranean merchants, in exchange for strategic products” (Cahen 1997; Vallet 2010b: 222). Although the Italians took advantage of the friendly relations established with the Mongols in order to expand their networks and travel to Asia during the thirteenth and fourteenth centuries, the Red Sea and the *kārimī* merchants continued their dominance during the “Pax Mongolica” (Labib 1978). Egypt also kept its strong interest in the Black Sea: in 1281, Sultan Qalāwūn obtained a treaty stipulating that “Byzantium authorizes the Egyptian vessels to enter the Bosphorus” (Rosenberger 2000b: 118). Egypt ensured a regular slave supply from the Caucasus and the steppes via Byzantium or through the Genoese, who were active in the Black Sea. Other slaves came from Nubia, Ethiopia, or sub-Saharan Africa.

While the first Rasūlid ruler in Yemen controlled the Holy Places of Mecca, the situation changed from the time of Baybars onward: the Mamluk sultans “gave themselves the privilege of confirming the sharifs [descendants of the Prophet] of Mecca and Medina in their powers, at the time of successions” (Garcin 1995b: 356). Baybars’ victory over the Mongols gave him indisputable primacy, marked by the dispatch, by Sultan Rasūlid al-Muzaffar, of an embassy carrying lavish gifts, including horses richly harnessed, musk, amber, aloeswood, and Chinese stoneware and porcelain (Vallet 2010b: 496). The relative control of the Egyptians over the Holy Places, however, “left room for the sharifs of Mecca” and recognized “some legitimacy” for the Rasūlids (Vallet 2006: 396, 421). At sea, the Yemenis largely controlled the maritime networks until 1260; after this time, there was “shared control” over these networks (Vallet 2006: 416). But the fact remained that Egypt had become the “central territory of the Islamic world,” at the same time developing a cultural and religious conservatism to confront the Mongol threat (Haarmann 1993).

Sultan Qalāwūn pursued the military effort initiated by Baybars. In 1281, the Mongol army of the Ilkhān Abaqa was repelled near Homs, and the Mamluk state seized the Frankish posts of Marqab (1285) and Tripoli (1289). Acre was taken by Qalāwūn’s son in

1291.⁴¹ Qalāwūn was the first to import Circassian slaves, who would play a key role in later events.

In 1295, the Mongol Ghāzān seized the Ilkhānid throne and converted to Islam, imitated by the Mongol aristocracy. This conversion failed to prevent ongoing war with Muslim Egypt. Damascus was occupied in 1300, but the Mongols were heavily defeated in Syria in 1303, and Ghāzān died soon afterward. Under his successors, Iran abandoned its plans to counter Egypt in the Mediterranean. A peace treaty was signed with the Mamluk sultan an-Nāṣir Muḥammad ibn Qalāwūn in 1323, through the slave trader Abu al-Majd al-Sallāmī, who was rewarded by the right to trade without tax payments for half of his sales in Egypt.

The Mamluk state of Egypt was the greatest power of the western Muslim world, especially under Sultan an-Nāṣir Muḥammad (1299–1340), who affirmed his suzerainty over the holy cities of Mecca and Medina. He received embassies from many Muslim countries, among them the Delhi sultanate. Egypt's authority extended as far as Armenian Cilicia and Anatolia: in 1323, Egyptian armies controlled the Armenian kingdom of Cilicia and appropriated its king's treasury. Cairo was then fully experiencing its greater size; the city had 400,000 inhabitants in 1300 (Morris 2013: 148). Because silver was being exported to Yemen and India, as well as to Syria, Egypt experienced a silver shortage.⁴² The Mamluks then decided to take over the Christian kingdom of Little Armenia. This expansion, combined with the decline of the Ilkhānid state, allowed Egypt to control most of the commercial traffic.⁴³ The Italian merchants brought significant amounts of silver to Syria and Alexandria.⁴⁴ Meanwhile, more and more slaves were being bought; the number of royal Mamluks stationed in Cairo rose from 6,000 to 12,000 (there had been 4,000 during Baybars' reign) (Wink 1997: 189). Administrative reforms ensured increasing tax resources.⁴⁵ The sultan engaged in substantial expenditures for irrigation and other infrastructure. Egypt benefited from significant demographic growth until the 1330s. Moreover, the country implemented discriminatory regulations against the Christians at this time, while the spoken Coptic language disappeared (Haarmann 1993).

In the Red Sea, Egypt exerted a certain amount of power, with the Yemeni Rasūlids acknowledging Cairo's suzerainty; however, relations between Egyptians and Yemenis were complex and changeable, with the reality tending toward "resource sharing drawn from long-distance trade" (Vallet 2006: 421). Under the Mamluks Baybars and

⁴¹ During the siege of Acre, the Muslims used trebuchets to throw explosive devices, a technique they had learned from the Mongols.

⁴² During the thirteenth and fourteenth centuries, Egypt minted silver instead of gold (Devisse 1972: 381).

⁴³ Garcin 1995: 355. The westerners attempted to acquire merchandise from Asia via a Mongol route, and through Little Armenia and Cyprus. In 1323, following the military campaigns of an-Nāṣir Muḥammad into Anatolia, "the Kingdom of Little Armenia began sending an annual tribute of 100,000 dirhams to Egypt" (Bacharach 1983: 166).

⁴⁴ At that time, silver was more expensive in Egypt and Syria. At the end of the fourteenth century, in contrast, it was gold which appears to have been most used by Italian merchants for their transactions (Ashtor 1971: 39–41).

⁴⁵ "The sultan's share increased considerably when a new cadastre was instituted and *iqṭā'* were redistributed in 1316" (Garcin 1995b: 349). In addition, the sultan incorporated the ports of Alexandria and Damietta into his Private Office.

Qalāwūn, the Rasūlid sultans of Yemen brought “offerings,” but stopped sending gifts after Qalāwūn’s death (1290). According to al-Maqrīzī, “[in 1305], many merchants⁴⁶ brought complaints against al-Mu’ayyad, the Yemeni sultan. Moreover, this sultan had stopped sending the 6000-dinar offering which had previously been carried from Yemen . . . Al-Muẓaffar Yūsuf . . . had had this offering sent for 40 years, as had his son . . . A letter was written condemning him and threatening him” (Vallet 2010b: 498–499). In 1308, Egypt planned a naval expedition – which later failed – using ships built at Qūṣ, a sign that no Egyptian war fleet existed in the Red Sea (Vallet 2010b: 500–501). This was followed by a further period resembling an “entente cordiale,”⁴⁷ prior to the 1330–1353 breakdown (Vallet 2010b: 503–505), which led to a decrease in *kārimī* trade (see below).

The main ports between Aden and Egypt, during the fourteenth century, were ‘Aydḥāb, on the African coast, and Qusayr, further north. Beyond Qusayr, goods were carried to Cairo – the most populous city in the Islamic world according to Ibn Battūta – and Alexandria.

Exchange networks also developed with West Africa. During the first half of the fourteenth century especially, the Mamluks benefited from gold imports from Mali. Testimonies by al-Qalqashandī and Ibn Khaldun reveal the importance of trade between Egypt and western Sudan at this time, via routes crossing the interior of the continent.⁴⁸ Large amounts of gold were brought by the Muslim princes of West Africa who stopped at Cairo en route to Arabia.⁴⁹ The quantity of gold spent by the Mali king Mansā Musā in 1324 – while traveling to Mecca⁵⁰ – was so huge that it led to a lasting drop in the price of this metal in Egypt.⁵¹ From the twelfth and, more importantly, the thirteenth century, however, the Spaniards and the Italians obtained part of their gold from western Sudan, especially via tributes imposed on Muslim powers.⁵² In 1235, following the siege of Ceuta (Morocco) by Genoa, a yearly tribute

⁴⁶ Here, al-Maqrīzī refers to the complaint made by the great merchant ‘Abd al-‘Azīz b. Maṣṣūr al-Ḥalabī: arriving at Aden from China with a huge amount of goods, this merchant saw his goods heavily taxed (Vallet 2010b: 500).

⁴⁷ An Egyptian military expedition was launched in 1325 to help a Rasūlid prince who was involved in a struggle for power (Garcin 1995b: 356).

⁴⁸ Ibn Khaldun mentions a caravan composed of “twelve thousand camels” which went from Cairo to Mali via Takaddā (the copper production site) each year.

⁴⁹ In addition, merchants from Egypt traveled to West Africa (Ashtor 1971: 18, and below). The Mali Empire emerged around 1235, at a time when Ghana appears to have been in decline. The founder of this empire, Sunjata, may have not converted to Islam, as Ibn Battūta and Ibn Khaldun assert. Mansā Uli, Sunjata’s son and successor, did accomplish the pilgrimage to Mecca. Between four and ten tons of gold were carried through the Sahara each year (Magalhães-Godinho 1969: 119). The kingdom declined during the late fourteenth century, and the capital was looted by the Songhay around 1400. Mali is first mentioned in Arab texts prior to the thirteenth century: one finds “Mallē” in Idrīsī, and “Mālī” in al-Gharnāṭī (twelfth century) (Lewicki 1974: 65–66). A king of Mali may have been converted to Islam by an Ibadi from southern Tunisia during the eleventh century.

⁵⁰ M. W. Helms (1988: 137) is correct in highlighting the importance of the Mecca pilgrimage as the source of sacred power in strengthening the social legitimacy of the elites. Thus, soon after his access to power in the Songhay Empire, Askia Muḥammad Ture performed this pilgrimage.

⁵¹ See al-‘Umārī, quoted by Devisse 1972: 375.

⁵² As J. F. Richards points out (1983: 10), after the capture of Byzantium by the Fourth Crusade in 1204, the Byzantine gold hyperpyron was dropped from Mediterranean trade, and Italian cities such as Venice,

was paid to this Italian port. As of the middle of the thirteenth century, Genoa may have been “the first state in Italy that undertook systematic minting of gold coins to reinforce its position in the trading ports of the Orient” (Ashtor 1971: 65). During the fourteenth and fifteenth centuries, the Italian merchants (Florentines, Genoese, and later Venetians) were active in the ports of the Maghreb.⁵³ Until the middle of the fifteenth century however – at the time of the Portuguese arrival on the coasts of Guinea – and even later, Egypt seems to have been able to acquire significant amounts of gold from western Sudan. Egypt also benefited from the massive import of Italian gold coins (from Florence and Venice) from the late thirteenth century onward. At his death in 1399, the sultan Barqūq left 1,400,000 dinars in cash (Ashtor 1971). The Venetian ducat, often found in Egypt after 1350 and that has been unearthed as far as India, became the main gold currency between 1399 and 1422; later the sultan Barsbāy issued a new gold dinar (Bacharach 1983: 171). Many dinars would be issued by Egyptian sultans during the first half of the fifteenth century.⁵⁴ In 1353, the sultan lowered customs fees to 10 percent for European merchants: this was less than the 10 to 25 percent which Muslim merchants were required to pay.

During the fourteenth century, the *kārimī* merchants, whose activity was looked upon with favor by Mamluk state policy, continued to dominate Red Sea trade. For E. Vallet, the separation between the networks of the Red Sea and those of the Indian Ocean was more effective than it had been during the previous century: the Rasūlid sources mention no trips made by *kārimī* merchants to India. This does not mean that Egyptian merchants were not active in India: thus, the renowned Nāṣir al-Dīn Muḥammad b. Musallam al-Bālisī kept itinerant slaves who traded in South Asia, but he is never termed a *kārimī* (Vallet 2010b: 520, 587).⁵⁵ Egyptian merchants also traded in western Sudan, Persia, and Anatolia: in fact, their activities extended from the Maghreb to China. Imports of blue-and-white Chinese porcelain, which was later copied, appeared in Egypt during the fourteenth century (Scanlon 1970: 85ff.). The great merchants acted as bankers, lending money to the sultans and the emirs⁵⁶ and providing troops, weapons and horses. In return, they benefited from these rulers’ help. Loans from *kārimī* are thus reported in 1285, 1299, and 1317. The *kārimī* also lent money to the sultan of Yemen; even “the king of Mali, Mansa Mūsā, who owned the gold mines of the western Sudan, borrowed money from them before returning to his country from Mecca” (Labib 1978: 667, after al-‘Umārī). Close relations with a state power, however, were not without risk: the story of a converted Copt, Karīm al-Dīn al-Kabīr, clearly illustrates this risk.

Genoa, and Florence began relying upon gold from West Africa for their new currency issues; this metal was carried by caravan to northern Africa. Venice also received gold from its outposts in the Black Sea.

⁵³ Ashtor 1971: 22ff. A resurgence occurred in the minting of gold coins in Europe during the mid-thirteenth century, thanks to the supply of gold from West Africa; increasing gold production in central Europe also played a role as of the second half of the thirteenth century.

⁵⁴ At least until 1438 (see Bacharach 1983: 174–175).

⁵⁵ Commercial houses worked with freemen, and also with slaves, who prospected markets and bought and sold merchandise.

⁵⁶ Forced sales (*tarḥ*) also allowed the sultans to obtain hard currency: in 1332, an-Nāṣir Muḥammad sold “wood and textiles at prices three times higher than market prices” (Rosenberger 2000a: 257).

He was responsible for the property of the sultan [and] progressively took the upper hand over the finances of the state by appointing his nephew as controller of finances and later Superintendent of the *Kārim*: thus he supervised the tax revenues from the trade between Aden and ‘Aydḥāb . . . The family was able to profiteer from his position. When Karīm al-Dīn al-Kabīr’s possessions were seized in 1323, forty-one chests were retrieved, which were full of incense, aloeswood, amber and musk, aromatics that necessarily originated from the *Kārim* trade. (Vallet 2006: 426; 2010b: 502–503, after Ibn Ḥajar)

As for al-Bālisī (who died around 1374), his fortune was so large (he left ten million dinars) that only one (Hindu) merchant from India, with whom he was in fact associated in some businesses, could be compared to him. According to Ibn Tajribirdī, “as far as his wealth was concerned, he was the marvel of his time” (Vallet 2010b: 477). With these “merchant princes,” “speculation had merely changed scale” (Vallet 2010b: 477). Al-Bālisī’s grandfather had already been among “the most famous merchants of the Orient, if not the world” (Labib 1969: 82–83). Labib writes: “He owned a large capital and used slaves as his agents; he sent them to the Red Sea and the Indian Ocean, and to the Bilād al-Takrūr [West Africa] as well, to trade on his account and export products towards Egypt. He was constantly going from Cairo to Qūs, to welcome his caravans from India” (1965: 112; Vallet 2010b: 476 n. 28). Ibn Battūta notes the huge wealth of the Saha, who were Hindu merchants of Daulatabad: “They remind the *kārimī* merchants of Egypt,” whose wealth, Ibn Battūta adds, could be compared to that of China’s greatest traders.

Unlike merchants in some other countries, the power of Egypt’s great merchants relied primarily upon commerce and finance: at this time, they were neither tax collectors nor were most of them landowners.⁵⁷ Although their political activity was usually indirect, their presence in the ruling sphere of the state has been well attested. The great merchants “accessed the emirs and the sultans,” as shown by the figures already mentioned of Karīm al-Dīn al-Kabīr and of the “chief of the merchants” (*kabīr al-tujjār*) al-Bālisī (Vallet 2006: 439). In 1308, faced with the threat of an Egyptian invasion, the Rasūlid ruler of Yemen blocked the departure of the ships of the *kārim*. The merchants then appealed to the sultan of Egypt to abandon the military operation (Vallet 2010b: 515). In 1350, when the Rasūlid sultan al-Mujāhid ‘Alī was taken prisoner by the Egyptians in Hijāz and taken to Egypt, the *kārimī*, including those in Egypt, intervened, paying most of the tribute demanded for his release (Vallet 2010b: 516).

During the 1330s, trade declined; a crisis with Yemen broke out (see below) and disorders affected the ‘Aydḥāb region, leading to rising pepper prices in Alexandria, in 1347–1348 especially (Vallet 2011). At the same time, between 1341 and 1382, Egypt was experiencing a period of instability: no fewer than twelve sultans reigned within the space of forty-one years. The country was struck by the greatest plague epidemic in 1347, followed by drought and more epidemics in 1375; these calamities led to a lasting impoverishment of the Mamluk Empire. In addition, the port of Alexandria was looted by the king of Cyprus Pierre de Lusignan in 1365. The plague reduced the Egyptian population by half, and agricultural production fell by over 60 percent, due to

⁵⁷ During the fourteenth century, however, Mamluks sold their *iqṭā’* to *kārimī* merchants, who then acquired land (Labib 1978: 669).

insufficiently maintained irrigation works and exploitation of the peasantry (Borsch 2005; Findlay and O'Rourke 2007: 130). While agriculture declined, pastoral nomadism progressed in various regions. Egypt's trade balance at the time was largely negative and, unlike the case in Europe, per capita income dropped. The road from 'Aydḥāb to Qūs was no longer in use in the 1360s due to the insecurity afflicting the region.⁵⁸ The port of 'Aydḥāb was abandoned; goods were now unloaded at Qusayr, and from 1380 onward at Tūr, on the coast of Sinai. Importing spices became difficult and in 1345 Venice sent no fleet to Egypt (Lopez 1987: 387). Jeddah, where Yemeni merchants had settled, took on new prominence, as did caravans linking Aden and Mecca. Networks were restructured, benefiting the sharif of Mecca, and triggering conflictual situations at the start of the fifteenth century.

Circassian Mamluks at last succeeded in chasing off Qalāwūn's family; they handed the reins of power to one of their own, thus starting the "dynasty" called Burji. The reign of the Circassian Barqūq (1382–1399) marked a return to political stability. Despite the country's relatively unfavorable economic situation, Ibn Khaldun describes Cairo – which he visited in 1382 – as the "metropolis of the world, the garden of the universe." He quotes al-Maqqarī, great *cadi* at Fez: "Who has not seen Cairo will never measure the degree of power and glory of Islam." For Ibn Khaldun himself, this city "was the symbol of the universality of Islam and of the Muslim state" (Bianquis and Garcin 2000: 8–10). The polyglossia required of the elite reflected this universality: the Siennese P. de Mignanelli relates that "Sultan Barquq commented directly on his alternating use of Greek, Arabic, Turkish and Persian, in agreement with the character of these different languages, supposedly adapted to various functions and moments" (Grévin 2009: 661). Cairo had only 115,000 inhabitants in 1400, whereas it had had 400,000 in 1300 (Morris 2013: 148). While trade in the Red Sea was growing once again, the Circassian sultans and their immediate circle initiated a new policy: they became directly involved in trade by associating with one or several merchants. The state's interest in trade, which increased during the fifteenth century, was a logical consequence of the drop in land revenues due to the country's depopulation and agricultural decline. In 1383, the wealthy Zakī al-Dīn al-Kharrūbī became "the private merchant of Sultan Barqūq while at the same time conducting business in Egypt for the Yemeni sultan al-Ašraf Ismā'īl" (Vallet 2010b: 520, quoting al-Fāsī). In addition, Zakī al-Dīn al-Kharrūbī obtained the official post of market inspector for Cairo. In 1394, in order to finance military expenses and to counter the threat of Tamerlane's armies, Barqūq borrowed one million dirhams from three merchants, among them Burhān al-Dīn al-Maḥallī, who became "the merchant of the sultan" and enjoyed a meteoric rise. This merchant also conducted trade for the Rasūlid sultan of Yemen, acting as his diplomat (Vallet 2010b: 523–525).

After Barqūq's death, however, rivalries burst out within the military class, and the country lapsed into difficulties. Moreover, in the Black Sea, the capture of Caffa and Tana by Tamerlane put a halt to the exportation of slaves from these ports to Egypt.

⁵⁸ Garcin 1976: 424. Further south, the Horn of Africa was also at war; the expansion of the Ethiopian Solomonic state under King Amda Tsiyon (1312–1342) led to a major confrontation (1332) with a Muslim league dominated by the sultanate of Ifat.

The turn of the fourteenth to fifteenth century appears to have been marked by economic difficulties as well as political disorders.

Yemen, from the Ziyadids to the Rasūlids: Production and Long-Distance Trade

Aden is the destination for people from all countries, because it is linked to China, India, Sind, Iraq, ‘Uman, al-Bahrayn, Egypt, the country of the blacks (al-Zanġ) and Abyssinia. Each week, many merchants and ships arrive in its port, as well as much merchandise and [various] goods. (al-‘Umarī [1301–1349], quoted by Vallet 2010b: 22)

[The Delhi sultan] mentions that he sent money for the Holy Places and for Jerusalem, as well as gifts for the sultan [of Egypt], whose value was over 100,000 dinars. Yemen cut the route for [the sultan of Delhi] and his ambassador was killed by the mamlūks of the [Yemeni] ruler . . . The Yemeni people took all the goods [from Delhi] and spent them. (al-Qalqashandī, quoted by Vallet 2010b: 504)

The relative decline in trade in the Persian Gulf was beneficial for the Red Sea and Yemen, which controlled entry to the Red Sea. Despite Yemen’s political fragmentation among factions belonging to antagonistic religious currents,⁵⁹ an active trade developed centered on the port of Aden, which served as intermediary between the Red Sea and the Indian Ocean. Al-Muqaddasī (tenth century) writes that “a merchant trading with China came as a prince to Aden, bringing with him a thousand dirhems in silver as capital and returning home with a thousand dinars in gold” (Chaudhuri 1985: 107). According to Ibn al-Mujāwir, the decline of Tiz and Hormuz during the twelfth century (linked to wars affecting Iran) fostered the rise of Aden, where stone building flourished under the Zuray’ids, who organized the port, its custom house, and its market. These developments were initiated by both rulers and great merchants (Vallet 2006: 148). Many Chinese ceramic items have been excavated in Yemen and in Egypt, especially at Fustāt, revealing the new significance of southern routes in Indian Ocean trade during the Fatimid and subsequent periods. The ports of Athar (northern Yemen) and Aqaba have also yielded Chinese ceramics. Some celadons exported by the Northern Song (960–1127) have been found only “at Athar, Fustāt and Kilwa.”⁶⁰ Aden’s significance is heightened by al-Muqaddasī, writing at the end of the tenth century, who “gives a long list of imported merchandise, including slaves and leopard skins from East Africa and products from eastern Asia” (Rougeulle 2001: 74); Aden was “the center to which travelers flock from every quarter . . . It is the gateway of as-Sin [China] and the sea-port of al-Yaman, the granary of al-Maghrib and the depot for all kinds of merchant goods” (Abu-Lughod 1989: 241; Vallet 2010b: 22). Ghulāfiqa, the port of the city of Zabīd, has yielded

⁵⁹ In 1016, after the Ziyadids, former Abyssinian slaves, known as the Banū Najāh, briefly dominated the country; they pledged allegiance to the Abbasid caliph. The Sulayhids who succeeded them, in contrast, owed allegiance to the Fatimids. In Aden, the Sulayhids relinquished power to the Zuray’ids (1078–1174), who also controlled part of the Hadramawt.

⁶⁰ Rougeulle 1996: 166–167 n. 21. Athar has also yielded ceramics from the Persian Gulf. The Chinese ware includes white porcelain, stoneware, and Yue celadon.

Chinese porcelain dating to the tenth–eleventh century;⁶¹ Yemenis were present at Quanzhou during the twelfth century.

Documents from the Geniza describe trade activity during the eleventh and twelfth centuries in detail. Aden was also a center for textile production (cotton fabrics), though not yet a significant one, as large amounts of textiles were imported from India and Egypt (Margariti 2007: 57–58). During the 1120s, two Jewish notables illustrated the size of the networks and the immensity of the routes traveled by merchants: Halfon traded “between Egypt, India, East Africa, Syria, Morocco and Spain,” while the Jewish Moroccan Abū Zikri Sijilmasī, the representative of the Cairo merchants, traveled “to Egypt, Aden, southern Europe and India” (Pearson 2003: 103) (see above). As mentioned above, there was the Jewish merchant Lebdi, and the representative of the merchants of Aden Hasan ben Bundar and his son Madmūn, who conducted business between India and Egypt from Aden. Goitein also describes the travels of a Jewish trader, Allan, the son of a great merchant from Cairo, between Aden and India (Goitein 1987; Pearson 2003: 104). During the eleventh and twelfth centuries, although customs duties appear to have been relatively high at Aden, export taxes were low: the system aimed to “encourage the merchants to settle at Aden” and buy merchandise in the city (Margariti 2007: 134, 208). Note that taxation was the same for all merchants, whether Muslim or not. Aden’s prosperity is illustrated by the wealth left by Bilāl ben Jarīr, Aden’s governor, when he died in 1151/1152 and by the yearly tribute of 100,000 dinars the rulers of Aden paid to their overlord around 1083.⁶² This opulence attracted a great deal of attention: in 1135, Qays sent a flotilla against the port, but failed to seize it. Relying upon letters from the Geniza, Goitein (1954b) has related how the unexpected arrival of two ships belonging to the merchant Rāmishṭ put an end to the siege. Of Persian origin (Sīrāf), based at al-Tīz (on the Makran coast), Rāmishṭ was one of the richest merchants trading with India. “He took it upon himself to provide a new cover for the Ka’aba. He went all out in this, using the most exquisite cloths, so that the price of the cover amounted to eighteen thousand dinars” (Margariti 2007: 144, quoting Ibn al-Athīr). Extending between China and East Africa, Rāmishṭ’s business was conducted via a family network made up of his sons and four slaves (see Ibn Ḥawqal 1964: 277–278, quoted by Vallet 2015: 477).

Various port cities in South Arabia were active centers in long-distance Indian Ocean trade. Between Aden and Mirbāt, Idrīsī notes the ports of Las’a (al-As’a, Shiḥr-east) and Sharma. The merchants of these cities were armed. According to al-Muqaddasī (late tenth century), in the Arabian seas between Aden and Oman, “no ship can do without armed men (*muqātila*) and fire-throwers (*naffātūn*)” (quoted by Vallet 2015: 476). Located in the Hadramawt, ash-Shiḥr (mentioned by Muqaddasī, Ibn Ḥawqal, and al-Sīrāfi for its incense) took the position formerly occupied by the ancient port of Qanī in maritime international trade from the eighth century onward

⁶¹ The city of Zabīd was founded in 820 by the governor Ibn Ziyād, appointed by the Abbasid caliph. Ziyād founded the Ziyadid dynasty (818–1018).

⁶² Bilāl ben Jarīr left “650,000 Māliki [local currency], and over 300,000 Egyptian dinars, 1,700 pounds of silver ornaments of all descriptions, perfumes, and arms in immeasurable quantities, in addition to ‘rarities’ from the remotest parts of the world, such as China or North Africa, obviously brought by the merchant as ‘presents’ to the almighty governor” (Goitein 1954b: 248).

(Hardy-Guilbert 2010). Various types of pottery from the Persian Gulf have been recovered that date to the first centuries of Islam,⁶³ as well as Egyptian ceramics with metallic luster and Chinese ceramics.⁶⁴ The official history of the Tang notes Shiḥr under the name “Sheguo” on a maritime route which ran from Guangzhou. Shiḥr appears in a later Chinese chronicle from the twelfth century under the term “Shi-ho.”⁶⁵ Polychrome sgraffiato ware from the Persian Gulf, dated to the twelfth century, has also been excavated; this pottery is known at Kilwa on the East African coast. The Rasūlid manuscripts mention the presence of ships from Mogadishu in the port of ash-Shiḥr around the end of the thirteenth century (see *Kitāb al-irtifāʾ*, 1296) (Bernard *et al.* 2015: 459). This port has yielded some African pottery belonging to the Tana tradition.

Located 50 kilometers further east, Sharma was founded during the late tenth century. Excavations have shown that Sharma was “a transit entrepôt, a cluster of warehouses probably founded by Iranian [Sīrāfi] merchants and entirely devoted to the maritime trade” (Rougeulle 2015: 5; see also Vallet 2015: 472).⁶⁶ The Sīrāfi diaspora may have been involved in this creation *ex nihilo* during the Buyid rule in Iran and Iraq. After Sīrāf was destroyed by an earthquake in 977 – and later, after the fall of the Buyids – families of traders from Fars moved not only to Qays, Hormuz, and Suḥār,⁶⁷ but also to South Arabia and East Africa.⁶⁸ The town of Sharma had a wall whose construction may be linked to Sulayhid expeditions along the Hadramawt coast around 1063. Phase IV (second half of the eleventh and early twelfth centuries) saw a major development of the entrepôt, after the Seljuks had taken control of Oman and western Asia by ousting the Buyids. As Rougeulle notes (2015: 149), Sharma’s flourishing appears to be linked to “the ascent of the ports of Hormuz and al-Tiz [Makrān coast], controlled by the Seljukids from Kirman.” It is also linked to the decline of Suḥār, looted by the Seljuks in 1053 (Vallet 2015: 476). Moreover, Sharma’s development implies alliances with the tribal groups controlling the region (Vallet 2015: 470). While Sharma’s architecture is different from that of Shiḥr, the assemblage found at Sharma does show some similarity. Both sites imported foreign products independently, however, and Chinese ceramics are rare at ash-Shiḥr. Ceramics reveal that Sharma was in contact with the Persian Gulf, the Red Sea, East Africa, Pakistan, southern and northwestern India, and China simultaneously. Sharma has yielded “eggshell ware,” a few shards of blue-glazed (also called Sassano-Islamic) ceramic, and sgraffiato ware from the Persian Gulf, as well as red-slipped Indian pottery. Indian

⁶³ Sassano-Islamic pottery, ceramics with white glaze and “a black manganese decoration, or a metallic ‘grey’ glaze, or a marbled green-blue decoration on white background” (Hardy-Guilbert 2001: 84).

⁶⁴ A “fragment of a painted stoneware cup from Changsha, in Hunan Province, dating from the Tang period, white bowls with hemmed edges from the 10th and 11th centuries, which are abundant at the Sharma site” (Hardy-Guilbert 2001: 86).

⁶⁵ Curiously, the book written by Zhou Qufei (1178) does not mention Aden, but cites “Maliba,” which is probably Murbāt (Hirth and Rockhill 1914: 25).

⁶⁶ One building, different from the others, may have been the house of the merchants’ chief, who may have levied taxes (Vallet 2015: 472).

⁶⁷ The looting of Suḥār by the Seljuks in 1053, however, marked the decline of this port.

⁶⁸ According to the geographer al-Muqaddasī, at the end of the tenth century, the merchant class at Aden and Jeddah was largely composed of arabicized Persians (Vallet 2015: 475).

merchants were probably present in the port. The proportion of Chinese ceramics (4 percent) is higher here than it is at other sites. The earliest Chinese ceramics go back to the third quarter of the tenth century and are present in Phase 1 (at the end of the tenth century). Various types of Chinese stoneware have been excavated (the great quantity of jars reveals a trade in perishable foods) along with *qingbai* porcelain dating to the Northern Song period (Zhao 2015b);⁶⁹ these have also been found in East Africa and along the northwestern coast of Madagascar (see below). Pottery imported from East Africa represents 16.2 percent of the unglazed ceramics found at Sharma; it includes pots decorated with incised lines, a few shards of Tana Ware, and four shards of *Arca*-impressed pottery which may reflect links with the Comoros and/or Madagascar, already present in the earliest layers at Sharma (Rougeulle *et al.* 2015: 169). Graphited red-slipped ware, well known in the Dembeni culture of the Comoros and found at various sites along the East African coast (see above), has also been recovered. In addition, copal (from East Africa and/or possibly from Madagascar) has been excavated, and makes up most of the resins identified at Sharma (Regert *et al.* 2008, 2015). These data tend to confirm a Buyid influence on the Swahili coast, which may have had an impact on later Shirazi traditions. The African pottery at Sharma was brought in with freemen or slaves (Vallet 2015: 476). Glass is relatively abundant; some vessels appear to have come from Iran; a few flasks with marbled finish and a goblet may have been imported from Egypt or Syria (Foy 2015: 331). Beads of the Indo-Pacific type have been unearthed, as well as carnelian and chalcedony beads, probably originating in India. The development of the entrepôt signals “a willingness among Persians to connect to networks linking Egypt, East Africa and India” (Rougeulle 2003: 296).

During Phase V in the second half of the twelfth century, Sharma was in decline; it was later abandoned. The discovery of Egyptian ceramics in the layer corresponding to Sharma’s destruction has led Rougeulle to connect this abandonment to “a naval attack conducted by Ayubbids from Aden.”⁷⁰ The Egyptian ceramics, however, may reflect a short phase of reoccupation of the site by the Ayyūbids after its abandonment. Sharma’s fall may be linked to raids by Qays and reveal conflicts between Qays and other (Sirāfi) Persian networks (remember that the shipowner Ramisht, a Sirāfi based at Tiz, intervened to help Aden during the attack launched by Qays in 1135) (Vallet, p.c., and Rougeulle 2015: 149–150). Sharma’s abandonment also corresponds to the rise of the cities of Shihr and Mirbāt, amid increasing competition and restructuring of networks along the South Arabian coast (see Vallet 2015: 477).

The Ayyūbids controlled Yemen as of 1173. Trade was flourishing at this time, but a crisis affected Aden in 1227–1228, caused by abuses inflicted on merchants by the emir in charge of administration. According to Ibn al-Mujāwir (c. 1230),

In 625 [1228], he seized the entire shipment of pepper from the merchants, all the small spices, as well as copper. He gave 40 dinars per *bahar* for the pepper and imposed its sale at the price of 60 dinars on the merchants of the Kārim. He took the copper from the merchants of the Kārim and paid 60 dinars per *bahar*, for the copper, then he imposed its sale on the spice merchants at

⁶⁹ On the difficulties encountered in defining and identifying *qingbai* ceramics, see Zhao 2015b: 279ff. These ceramics do not necessarily come from the Jingdezhen kilns.

⁷⁰ www.Islam-medieval.cnrs.fr/sharma.php

the price of 80 dinars . . . He took all the cotton that had arrived from India with the merchants, and confiscated it, neither buying nor selling it. (Vallet 2010b: 217)⁷¹

From 70 to 80 ships arrived each year at Aden, and the taxes collected amounted to 600,000 Māliki dinars (Ducatez 2003). The importance of Yemen grew from 1229 on, when the Turkmen governor ‘Umar b. ‘Alī b. Rasūl took advantage of the decline of the Ayyūbids to free himself from their authority⁷² and founded the Rasūlid dynasty. The rulers of this dynasty would be both “the witnesses of and the actors in a world in which Islam, trade and the state were closely linked to one another” (Vallet 2010b: 700). Basing their legitimacy on men of religion from lower Yemen (Shāfi‘i Muslims), the Rasūlids dominated the holy cities of the Hijāz until 1263. During this twilight of the Baghdad caliphate, the Rasūlids became the guarantors and propagators of Sunni Islam.

The Rasūlid archives reveal the advance of statebuilding during the thirteenth century, with the development of a bureaucracy in which merchants took part (Vallet 2006: 84). The Yemeni state managed to maintain a – fragile – alliance between the highlands and lowlands by setting up client relationships, mostly involving offerings of horses, fabrics, and silver to tribal shaykhs: in 1299, “the sultan al-Mu‘ayyad thus agreed to pay ‘20 000 Egyptian dinars’ to the Zaydi sharifs of the North in exchange for their protection along the [trade] routes” (Vallet 2006: 319).

The Rasūlids promoted trade without really being part of it, following a policy initiated by the Ayyūbids. Thus Tughtakīn (1181–1197) organized a fleet at Aden destined to protect merchant ships from attacks by pirates. It was financed by part of the customs duties collected. After him, al-Mas‘ūd (1215–1229) set up a new tax (*shawānī*) to be used for the maintenance of this fleet. The Customs House of Aden – erected as early as the beginning of the twelfth century⁷³ – was crucial to the economy of the country through the taxes it collected. Ibn al-Mujāwir painted a grim picture of the merchants’ arrival:

When a man arrives from the sea, it is as though he leaves the tomb, and the Customs House (*furda*) is like the place of gathering on the Last Day: there are interrogations, accounts, weighings, and inventories. The one who makes profit, his heart regains its health, but the one who is affected by losses is overwhelmed with concern . . .

Once the merchants have come off the boat and go to the city, they unload their personal belongings; three days afterward, fabrics and traded wares are unloaded at the customs. The bundles are untied, one after another; the fabrics are counted, piece by piece. As for the merchandise measured in *bahar*, these are weighed with a scale. Taxes are levied on all that is uncertain for the [merchants], until there is nothing left, while [the merchants] swear by God . . . that they have behaved righteously before the [customs] officers. (Vallet 2006: 129, 137)⁷⁴

⁷¹ Serjeant (1988a) also signals the high rate of taxation imposed by this emir in 1227.

⁷² Of Turkish origin (Manjik tribe), the Rasūlids arrived in Yemen in 1173 along with the Ayyūbid sultan Tūrānshāh (Saladin’s brother). A delegate of the Ayyūbids in Yemen, in 1235, ‘Umar was granted a formal mandate from the Abbasid caliph al-Mustansir to exercise authority over the country. This date marks the start of an independent Rasūlid state. ‘Umar minted its own money.

⁷³ According to Ibn al-Mujāwir, a Jew from Iraq may have codified the tax system at the beginning of the reign of the Zuray‘ids. The Ayyūbids appear to have introduced new taxes at a later time (Margariti 2007: 124ff.).

⁷⁴ “The extensive search [including body parts] of newcomers may have been an Ayyūbid innovation”: it is not mentioned in the Geniza documents (Margariti 2007: 118).

Except during periods of crisis, when the state's needs grew, taxes remained at moderate levels, around 10 percent of the value of merchandise (usually, taxes were calculated not on value, but on type of merchandise) (Vallet 2006: 189, 225ff.; Margariti 2007: 114). Goods from India were more heavily taxed than those from Egypt. Moreover, treaties show that taxes were different for textiles and for non-textile products: this certainly has something to do with the significance of fabrics in Arab society (Vallet 2007: 223). The sultans "spoiled" some great "merchants from India," who benefited from advantages at the Customs House and were granted offerings each year, paid out of the treasury (Vallet 2006: 138). This alliance with great merchants favored state control over the exchange networks. "At the end of the thirteenth century, the ships of the *kārim* were primarily ships belonging to the Yemeni *dīwān* [administration]," and the state collected payments on their freight (Vallet 2010b: 483). At the same time, one notes a disappearance of the naval Egyptian presence during the period 1230–1260,⁷⁵ followed by "shared control" of trade (see above). Moreover, the administration bought and sold merchandise. It exerted a preemptive right over strategic goods (wood, for example) or over coveted prestige goods such as enameled glass from Syria and Egypt; this influenced the processes of power legitimization (such items were kept in the Sultan's treasury or redistributed in order to strengthen exchange networks). The administration monopolized the purchase of products such as dates, incense, and fish liver oil (Vallet 2006: 227). The state also devoted itself to the development of agriculture⁷⁶ and crafts, refuting C. Cahen's idea (1970) that "the lands of Islam have no interest in production and its growth through the expansion of market outlets" (Vallet 2010b: 25). The *Nūr al-ma'ārif* (1294) reveals the existence of textile workshops belonging to the sultan; these were probably set up near shipyards (Vallet 2010b: 128).

Ibn al-Mujāwir notes the cosmopolitanism of Aden: "Most of the inhabitants of the city are Arabs from Alexandria, Cairo and the Rīf; Persians; Hadramis; people from Maqdiṣūh; people from the mountains; from Ḍubhān; from Zayla'; from Barbara and Abyssinia" (Vallet 2010b: 137–138). Ibn al-Mujāwir, a Persian, insists on the importance of the Sirafi merchants during the eleventh and twelfth centuries. While documents from the Geniza also show the role played by Jewish networks during the Fatimid period (see above), these networks were rapidly marginalized during the thirteenth century in Sunni Rasūlid Yemen. Marco Polo points out the role and importance of Aden. "This Aden is the port to which many of the ships of India come with their cargoes . . . It is by this way through Aden that the Saracens of Alexandria receive all their stores of pepper and other spicery." The hazards of marine navigation in the Red Sea for large vessels prompted merchants to transship goods onto smaller boats at Aden.⁷⁷ From Aden, the goods were carried to 'Aydḥāb, whence they were transported

⁷⁵ The Rasūlids may have destroyed an Egyptian fleet at 'Aydḥāb in 1240: "this fleet was about to invade Yemen" (Vallet 2006: 415).

⁷⁶ Yemen did not resort to the *iqṭā'* system in the same way as Egypt and Syria had done.

⁷⁷ Ibn Jubayr mentions a sewn plank ship called *jilaba*, with two masts, built at 'Aydḥāb (wood and coir came from India and Yemen), and with sails made of woven palm-leaves. The name may be linked to Fārs *galabat*, and the western Indian term *gallevat* (although the latter term refers to a warship). Ibn Battūta also mentions a sailing boat from the Red Sea called *ṣunbūq*, a word related to the Sanskrit *ṣambuka*, the

by caravan to the Nile valley. Marco Polo writes: “the Soldan of Aden receives a large amount in duties from the ships that traffic between India and his country, importing different kinds of goods; and from the exports also he gets a revenue.”⁷⁸ . . . On these also the Soldan of Aden receives heavy payments in port charges, so that it is said he is one of the richest princes in the world” (Marco Polo 1980, 11: 493). Aden appears to have controlled the incense market. Slaves and ivory from East Africa also arrived at Aden, through the port of Zayla’ especially, which was controlled by the Muslim sultanate of Ifat.⁷⁹ Aden exported products from other regions to southern Asia: among these were textiles, lead, kohl, glass, and coral. The main products from Yemen were horses and madder, which were carried to the western coast of India, the Coromandel coast, and Gujarat. Production adapted to external markets thus developed in the interior of Yemen, “in conjunction with the political integration of the Yemeni territory.” While the state was not the source of this adaptation, it became the seller of both horses and madder (Vallet 2010b: 687, quoting the *Nūr al-ma’ārif*).⁸⁰ Some of the production of madder on Sultanian lands was partly imposed in forced sales, at slightly above-market prices, and paid in silver (Vallet 2010b: 222). On the other hand, the export of Yemeni cotton cloth declined as of 1250 due to competition from Indian fabrics (Clarence-Smith 2005).

Most ships from India – about thirty large ships per year during the late thirteenth century – arrived around mid-April⁸¹ and spent several months at Aden; they benefited from the sale of madder in May, and from the horse markets in August, and then sailed back to India in late August or early September (Vallet 2006: 205, 461). The Egyptian merchants arrived at Aden in July–August, bringing textiles, saffron, copper, tin and precious metals, with which the Indian merchants paid their taxes to the Rasūlid administration. Through their fiscal policy and horse and madder trade, the Rasūlids were thus able to “divert part of the commercial exchanges between Egypt and India” (Vallet 2006: 213).

Besides Aden, Marco Polo mentions the port of Shiḥr, in the Hadramawt, where “many vessels and many merchants come from India.” From Shiḥr, merchants exported “good horses” to India and “made great profit from this trade” (Marco Polo 1980, 11: 495). The *Kitāb al-irtifā’* (written at the end of the thirteenth century) also indicates the arrival of large vessels from Mogadishu, Zafār, and India (Vallet 2006: 225). The inhabitants lived on rice, imported from India. Marco Polo also notes the

Middle-Persian **sambuk*, and the Neo-Persian *sunbuk* (Agius 2002: 195–196) (cf. also the Old Khmer and Old Malay *samvaw*). Once again, one perceives the complex and decidedly ancient interactions in maritime technology within the Indian Ocean. The Portuguese adopted the term during the sixteenth century (*zambucos*).

⁷⁸ Three fees were due on goods imported or exported: customs duties (*‘uṣūr*), a commission tax (*dilāla*), and a tax (called *shawānī*) for the maintenance of warships used by the state to protect the merchant fleet.

⁷⁹ The Rasūlids made an unsuccessful attempt at controlling Zayla’ and the African coast. At the end of the fourteenth century, however, al-Khazraji describes Zayla’ as being within the sphere of influence of the Rasūlids (Vallet 2006: 358).

⁸⁰ “The concentration of agricultural resources of coastal regions for the benefit of the state and the urban elites” explains the recurring resistance of tribes living outside the most fertile regions, especially from the mid-fourteenth century onward, and for more than a century (Vallet 2010b: 688).

⁸¹ Other vessels, from northern India, used to arrive between November and December.

export of horses to India from the port of “Dufar” (Zafār, Dhufar, nowadays in Oman), in a region which also produced incense. This city, usually independent, appears to have been a tempting target for both Hormuz and Yemen: an expedition out of Hormuz against Zafār occurred in 1262, and the city was conquered by the Yemeni rulers in 1278–1279, reflecting the Rasūlid’s will to control the networks.⁸² In the region, Al-Shahrī (1994) has discovered rock drawings featuring horses, camels, and vessels, along with an undeciphered Semitic script, all of which reveal the antiquity of trade (Agius 2002: 183). All this region of the Hadramawt was under the control of the Rasūlids during the second half of the thirteenth century.⁸³ Hadrami Sayyids traveled to Bijāpur, Surat, and Calicut, starting in around 1220 (Serjeant 1988b: 148).

Yemen was particularly prosperous under Sultan al-Mu‘ayyad’s reign (1296–1322), precisely during the period of maximum growth for the world-system. During the fourteenth century, this kingdom was a trade hub serving Egypt, India, and Africa. Efficient administration by the Rasūlids, combined with political stability – until the 1420s – allowed the economy and trade to thrive. A large number of coins were struck in the mints of Aden, Ta‘izz, and Zabīd. At the end of the thirteenth century, the average price level of pepper was 75 dinars per *bahar*, well above late twelfth-century prices, which had varied between 25 and 50 dinars (Vallet 2010b: 202 n. 114). Ibn Battūta writes this about Aden: “This city is the port of the merchants of India, to which come great vessels, from Kinbāyat [Cambay]; Tānah; Kawlam [Kulam, Quilon]; Qāliqūt; Fandaraina [Pandalayini]; al-Shāliyāt [Chaliyam]; Manjarūr [Mangalore]; Fākanūr [Baccanore]; Hinawr [Honavur]; Sindābūr [Goa]; and other places. The merchants of India live there, and the merchants of Egypt also” (Ibn Battūta 1959, 11: 372). Egyptian *kārimī* and Indians (whether Muslim or not) from Gujarat and Malabar were present at Aden. The Yemeni chronicles mention a Banyan quarter (Hindu) of textile traders in 1384. During the thirteenth century, while regular contacts were maintained with the Pāndya kingdom of South India, Yemenis also sold horses to the Hoysala, enemies of the Pāndya. “Far from being an obstacle to maritime trade, India’s political fragmentation during the thirteenth century actually encouraged the rise of multiple trade networks in which the Rasūlids found their place” (Vallet 2010b: 577). An embassy of Muslim merchants from Calicut (1374/1375) (whose names – Ghassanī, “the Ghassanid”; Ardabilī, “from the town of Ardabil,” in Azerbaidjan; Rūmī, “the Anatolian” . . . – reveal their diversity of origin as well as the significance of Persian networks) sheds light on the politico-religious preeminence of the Rasūlids. In a letter to the Yemeni sultan, the qadi from Calicut (1393) asked that the Friday prayer be offered up in the sultan’s name, a gesture amounting to a recognition of suzerainty (according to al-Khazrajī, the Muslims from Calicut had previously “made the address” in the name of the sultans of Delhi and Hormuz) (Serjeant 2000: 67; Vallet 2010b: 584). Various politico-religious choices intersected with competing and evolving exchange networks. The Rasūlid sultans gave financial support to men of religion in various ports

⁸² Zafār was “a place where various trade routes converged.” Its sultan owned merchant vessels and warships. The Rasūlid ruler used the capture of an Adeni vessel by the sultan of Zafār as a pretext for attacking and seizing the city (Vallet 2006: 512).

⁸³ The Hadramawt would later prove to be “too costly to control” and would regain its independence. The ports of Ash-Shihr and Zafār, however, had to pay taxes to the Rasūlids (Serjeant 1988a: 62).

of India, along the Coromandel coast, along the Malabar coast, and in Gujarat. At the end of the thirteenth century, the *Nūr al-ma'ārif* mentioned donations given to 64 men of religion in 46 Indian cities.⁸⁴ In 1393, religious notables in eleven cities were still receiving support from the Rasūlid sultan (Vallet 2006: 486). At the same time, every year, during the peak of the sultanate, “presents were sent to the Hindu rulers of Tāna, Manjalūr [Mangalore], Fākanūr or Hili,” and to notables such as Taq al-Dīn al-Tibī, the vizier of the Pāndya. Because the Chālukya rulers of Gujarat did not buy horses, they received no donation (Vallet 2006: 481, 497). Such patronage granted to dignitaries went hand in hand with the Rasūlid’s will to control the exchange networks.

Various South Arabian coastal ports were active in foreign trade during the fourteenth century. Between the tip of Oman and Yemen, Ibn Battūta mentions Shiḥr and Ḥafār; Ḥafār exported horses to India, whence the town imported rice and cotton (1959, 11: 383–384). He also describes the cultivation of “plants from India” such as betel and the coconut tree (1959, 11: 387–388). Ibn Battūta sailed from Ḥafār to the Indian port of Calicut, reaching it after twenty days.

The Dominican friars Guillaume Adam and Raymond Étienne, who traveled between the Persian Gulf and Ethiopia in 1316, “describe the reverse of the Rasūlid trade networks,” mentioning ports hostile to the Adeni merchants, such as Qays, Hormuz, Thana, Cambay, Kulam, and the Maldives. They point out the presence of pirates, who came to the island of Socotra (Vallet 2010b: 601). Earlier, Ibn al-Mujāwir had written: “Most of the inhabitants of this island are descendants of pirates, as pirates stop there and stay among them for six months at a time, in order to sell their booty” (Vallet 2010b: 602). The settling of Indian pirates on Socotra had already been noted by Mas’ūdī during the tenth century; it was later confirmed by Marco Polo, and by Ibn Battūta, who spoke of “robbers from India.” At that time, Guillaume Adam points out Aden’s place on the networks, as well as the significance of the spice trade for Egypt: in his treatise *De Modo Sarracenos Extirpandi*, “On the method of wiping out the Saracens,” which was presented to the Pope, Adam advocates using a fleet to block entry in the Red Sea – “a few galleys” would be enough, he feels – to weaken Egypt.

As already mentioned, the Yemeni sultans possessed a fleet that was active in the Red Sea. In contrast, private shipowners were primarily involved in trade with India (Vallet 2010b: 599).

Merchants sojourned at Aden during the trading period and while waiting for favorable winds; they were usually hosted by the city’s own merchants. “It should not be feared,” writes the *Nūr al-ma'ārif*, “that merchants stay in the frontier [Aden] in order to send horses and ships [by sea] to India and other regions each year, because this trade is a source of wealth for the port.” While “most of the merchants went back and forth, season after season, like the ‘waves of the sea’,” others chose to stay in Yemen, ready to leave, however, “to escape from impatient creditors, or from inconsistent powers, or in hopes of finding a new place ensuring a friendlier business climate” (Vallet 2010b: 141).

⁸⁴ Sending presents implies that the name of the Rasūlid ruler was pronounced during the Friday sermon (Vallet 2006: 486).

Merchants were sometimes given official positions. For a total of twenty superintendents (customs inspectors, *nāẓir*) recorded, however, only a few were associated with trade activities (Vallet 2010b: 267). An Egyptian trader, Jamāl al-Dīn al-Fāriqī, was employed as *nāẓir* during the 1340s. A member of the merchant family of the Banū al-Khuṭabāʾ, originating in Egypt, was appointed as superintendent in 1363. In 1385, Jamāl al-Dīn al-Fāriqī's grandnephew, Šaraf al-Dīn al-Fāriqī, became the new *nāẓir*.⁸⁵ By 1400, this position was attributed to one of the greatest merchants, Ibn Hilis, who had arrived earlier from Egypt.⁸⁶ Merchants did, however, often influence the choice of superintendent. "The merchants have an excellent position [in the kingdom]," notes al-'Umarī, "because most of the incomes of Yemen come from them, they are the source of these incomes" (Vallet 2010b: 275). Partnerships were also being developed between the administration and the merchants; the partnership established with al-Takrītī, an Iraqi who had arrived from Egypt via Mecca in 1320, was exceptional in terms of its scale: "The sultan entrusted him with 100,000 dinars from his assets, which al-Takrītī was supposed to invest in trade, and gave him 50,000 dinars taken on [the revenues] of Aden" (Vallet 2010b: 288, according to Ibn 'Abd al-Majīd). The funds remitted to al-Takrītī "aimed first at making a profit."⁸⁷

Despite the Rasūlid sultans' generally favorable trade policy (concessions and rebates appear to have been conferred upon the *kārimī* merchants), some cases have been reported in which merchants were abused. Quoting al-Khazraǧī, Serjeant has given the example of Ibn Manšūr al-Kūlamī al-Kārimī, but he may have overinterpreted the data. The story of al-Kūlamī nonetheless reveals the absence of a "fatherland" for merchants. The son of a Jew from Aleppo who converted to Islam, Ibn Manšūr migrated to Baghdad, and traveled to India via Qays and Hormuz. He traveled five times to China; later, in 1303/1304, he went from India to Aden, where, according to Serjeant, the sultan seized part of his goods – "Chinese *objets de vertu* and Chinaware, which he had brought with him – going beyond the established limits with him" (Serjeant 2000: 62). "He also had silk, musk, and jade vessels inlaid with gold" (Serjeant 2000: 62). In fact, Ibn Manšūr probably attempted to have his merchandise exempted by stating that his goods were alms destined for the Holy Places. The account given by Ibn 'Abd al-Majīd describes the magnificence of the gifts brought by the merchant (in order to seek forgiveness?), who was repaid by the sultan: "The sultan covered him with a wealth of precious robes and gave him the finest horses to ride, and wrote that double that which had been offered to him should be given to the merchant . . . The sultan's bliss confers great benefits on his kingdom" (Vallet 2010b: 280–281). Ibn Manšūr paid 75,000 Yemeni dinars to the customs at Aden; this accounted for one-third or one-quarter of the yearly amount of taxes due on products from India (according to the

⁸⁵ His brother was also named Jamāl al-Dīn al-Fāriqī, as was his great-uncle.

⁸⁶ Serjeant 1988a: 67, 71, 74. In the official hierarchy, the rank of *nāẓir* was just below that of governor. During the second half of the thirteenth century, the merchants recommended a Persian for the position of *nāẓir* "due to his capacities as ship secretary." The career of this *nāẓir* ended tragically: following complaints, he was arrested and tortured, and died soon afterward (Serjeant 1988a).

⁸⁷ Al-Takrītī first appeared as "merchant of the [Egyptian] sultan" with the Rasūlid rulers. Jamāl al-Dīn al-Fāriqī was part of the Egyptian embassy sent to Yemen in 1362; in 1365 and 1372, the Rasūlid sultan al-Afdal sent him to Cairo (Vallet 2006: 438).

Kitāb al-irtifāʾ). “Not unnaturally, the magnate went off to Egypt the following year” (Serjeant 2000: 62). “When he arrived in Egypt, in 1305, the value of the goods he had brought from China stood at nearly 400,000 dinars, according to al-Maqrīzī; nearly 10% sank into the coffers of the Mamluk state in respect of the importation tax” (Serjeant 2000: 281).

A strong Egyptian influence was felt in Yemen between 1315 and 1321; this later declined, until a crisis broke out at the time of Sultan al-Mujāhid ‘Alī (1322–1363). His reign was marked by fights among factions and decreasing provincial revenues. This period of disorder and anarchy occurred precisely at the time when the world-system was slipping into recession; it was also a period of climate change which led to weaker monsoons in the Indian Ocean. In 1330, an envoy of the sultan of Delhi (bringing money for the holy places in Hijāz and an offering for the Mamluk sultan of Egypt) was assassinated in Aden, and al-Mujāhid ‘Alī made off with the treasure. In reprisal, the Egyptian sultan imprisoned the Yemeni envoys that same year. Diplomatic relations were then suspended between Yemen and Egypt, until 1353 (Vallet 2010b: 504). In 1350, the emir of the Egyptian caravan at Mecca took advantage of the presence of the sultan al-Mujāhid ‘Alī – who had demeaned the Mamluks’ envoys – to take this sultan prisoner and carry him to Egypt (although al-Mujāhid ‘Alī was accused of attempting to re-establish Rasūlid preeminence over the Holy Places, this was only a pretext). The Yemeni sultan would later be freed following payment of a ransom. In 1353, Yemen resumed the dispatch of embassies and gifts to Egypt.

Within a context of diminishing exchanges, “fights about revenues drawn from taxes on trade” became “harsher in the 1330s”: for example, merchants retaliated for property confiscations by sharifs from Mecca by boycotting Jeddah from 1351 to 1354 (Vallet 2010b: 463–464). The capture of the Yemeni sultan in 1350 was clearly aimed at obtaining a share of merchant revenues required by Cairo. Moreover, riots broke out in the Tihāma as of 1353, ruining agriculture in the Zabīd region. Rasūlid documents reveal decreasing tax revenues in Aden during the second half of the fourteenth century, after peaking around 1320 (Vallet 2010b: 193).

Under Sultan al-Ashraf’s reign, the late fourteenth century saw an attempt at rebuilding the sultanate. This period was marked by growing trade and a renewed increase in tax revenues (Vallet 2006: 189). As already mentioned, Egyptian merchants living in Yemen were in charge of overseeing customs. At that time, state commerce also developed; it was managed by the administrative sector of the *matjar*,⁸⁸ which came to dominate customs, precisely at a time when the Egyptian sultan was directly involved in trade. This sultanian commerce sheds light on some of the conflicts occurring with merchants. The institutionalization of state commerce, however, does seem to have benefited a small group of “sultanian merchants” – prefigured by al-Takrītī, around 1320 – who took advantage of tax exemptions and had privileged access to imported merchandise. From 1390 on, merchants were appointed to head the sultanian *matjar* of Aden; among these was the great merchant Ibn Jumay’, to whom the sultan “gave control over the *matjar* in Aden and later . . . over all of his affairs”

⁸⁸ The institution of the *matjar* goes back to the Fatimids (see above). It is mentioned by the *Nūr al-ma’ārif* during the thirteenth century with reference to the Rasūlid sultanate (Vallet 2006: 140, 202); this office of the *matjar* was developed at the end of the fourteenth and during the fifteenth century.

(Vallet 2010b: 292, quoting al-Fāsī and al-Maqrīzī). An agent of al-Maḥallī, the “merchant of the Egyptian sultan,” was hired to supervise the *matjar* of Aden (Vallet 2010b: 526). These merchants also conducted their own businesses, and were able to acquire hegemonic positions on the markets (Vallet 2010b). The title “chief of the merchants” (*raʾīs al-tujjār*) appeared at this time. At the end of the fourteenth century, trade in horses sold at Aden was brought under state control (Vallet 2010b: 377–378). Bā Makhrama mentions the existence of separate quarters in the city of Aden for Jews, Abyssinians, Hindu merchants from Gujarat (Banyans), and people from Mogadishu (Vallet 2010b: 138). Gold imports from Egypt to Yemen reflect a negative trade balance between Egypt and India, in favor of India; but this was not a new phenomenon. The treasure found at Broach (Bharukaccha, Gujarat) (dated to 1382) containing Rasūlid silver coins as well as Egyptian dinars and dirhams reveals an outflow of precious metals from Egypt and Yemen to India (Vallet 2010b: 230–231). One notes the resumption of embassies between Yemen and India during the late fourteenth century. In 1367, envoys from Cambay and Sind brought “precious goods and pepper trees” to Aden. In 1369, the ruler of Calicut sent offerings to Sultan Al-Afdal, and in 1381, an embassy sent by the king of Thana arrived in Aden at the same time as one dispatched by the sultan of Bengal (Vallet 2010b: 580, according to al-Khazrajī). Bengal sent gifts once again in 1391. In addition, Yemen maintained privileged links with the Kerala coast.

The importance acquired by Egypt and Yemen in Indian Ocean networks between the tenth and fourteenth centuries was considerable, not only in India, but also in East Africa, where Swahili towns also retained links with Oman and the Persian Gulf. The development of trade between the Muslim world (and other Indian Ocean regions and networks) and East Africa goes far toward explaining the rising prosperity of the Swahili culture at this time.

12

East Africa: The Rise of the Swahili Culture and the Expansion of Islam

From the Zanj to the Swahili (Eleventh–Thirteenth Century)¹

From the eleventh century onward, in connection with an expanding trade between regions and with countries abroad, the culture of the Swahili city-states asserted its status as one semi-periphery of the world-system, coevolving along with the system's cores. Islam spread only along 1,500 kilometers of coastline – but not inland – a process clearly simultaneous, in time and space, with the development of towns and trade.² As was the case in West Africa, Islam merged with African beliefs and practices (Insoll 2003: 172) (generally speaking, a semi-periphery exhibits politico-religious and economic organizational forms that derive from its dominant cores as well as from the peripheries from which it springs). Wright points out (1992) that Islam developed, not mainly in towns located near the Arabian heartland – in the north – but instead spread to the most significant trade centers, along the coast, and then on to secondary centers, along paths already traced by the networks. Hierarchized societies formed, based on both African and Arabo-Persian organizational principles. Swahili cities also developed crafts that took advantage of technological inflows from the system's cores (India, Egypt, and Persian Gulf); such crafts included the manufacture of textiles, shell beads, iron tools and weapons, and leather items.³ These technological importations were limited, however, by the geographical and human characteristics of the Swahili coast. Other inflows included cultivated plants and domestic animals (see above). Various cities show an economic specialization according to neighborhood. Artisanal products were traded with populations from the interior and probably from the Comorian archipelago and Madagascar. They were also destined for local markets. As in other regions of the world, the Islamic religion brought with it changes in apparel, thus stimulating both the textile and dye industries. Textile manufacturing was observed at Shanga during the eleventh century, and it was particularly significant at Kilwa during the twelfth and thirteenth centuries: a large number of spindles have been excavated there (Spear 2000: 264). Remnants of African cotton (*Gossypium herbaceum*) are widespread at Chwaka (Pemba) (Walshaw 2005). In the western Indian Ocean, the insertion of the Swahili coast into a world-system dominated by Muslim networks led to an

¹ Various phases have been distinguished in the evolution of the Swahili culture; their periodization varies with each researcher (see Sinclair and Hakansson 2000: 468).

² R. L. Pouwels (2000: 253) also sees the rise of Islam along the Swahili coast as a process integrating East Africa into the exchange networks of the Indian Ocean.

³ Horton and Middleton 2000: 90. For Shanga, see Horton 1996: 403. See above on Indian technical influences at Shanga.

adoption of – and adaptation to – new practices in architecture, body care, clothing, and food, along with an increased consumption of rice (Insoll 2003: 177), primarily in the stone cities and later in rural settlements. LaViolette (2008) notes that rice was cultivated at Chwaka during the eleventh century.

The enrichment of the Swahili cities – and, more importantly that of the system’s cores – was achieved through a transfer of wealth from its peripheries via trade, taxes and tributes levied, and via religious or clientelistic networks. The power exerted by the cores was based upon the building of quasi-monopolies in both production and trade. Technological innovations allowed the cores to augment the desirability of the products they exported, in markets whose oceanic routes they controlled.⁴ Able to deal with numerous suppliers, visiting merchants were in a situation of oligopsony – except as regards the gold market. This dominance by the cores underwent processes of alliance and conversion of the coastal elites. Traditionally, manufactured products (first of all textiles, as well as beads and ceramics), were produced at increasingly lower cost, and exchanged for raw goods (ivory, gold, resins, and hides) and human beings. In the peripheries, buyers internalized their position as the dominated party: by acquiring goods exported by a dominant core, these recipients could capture and “use” an iota of the core’s power.⁵ Chinese celadons and porcelains were reputed to have protective and beneficial power, as were glass beads. Exotic goods, which were partly redistributed, helped the elites build up their status; this process increased the desirability of the products imported. Control over prestige goods enhanced the elites’ chances of capturing more people: wives, slaves, and soldiers. For this reason, East African elites were willing to encourage and even promote raw material extraction and the slave trade in order to obtain imported prestige items. Alpers (1975), Sheriff (1976), and Horton and Middleton (2000) have pointed out the exploitation of the African interior throughout history.⁶ Textiles, which could fit easily within various spheres of exchange, occupied a critical place in these processes, as seen in the legend of the purchase of Kilwa Island according to Shirazi tradition (see above).⁷

⁴ These aspects (on exchange value, and the processes of domination) have been developed in various articles: see Beaujard, 2007b, 2009, and 2013.

⁵ On cultural exchanges among the societies of the Pacific described by Mauss, M. Godelier (1996: 93–94) has pointed out that “the value of the objects in circulation resides first of all in immaterial considerations, these being the ideas and symbols that give the object social force” required for building social relationships. Obviously, this observation goes beyond exchanges of the potlatch or kula type.

⁶ Sheriff shows how trade impoverished the Kamba, who provided ivory. See Horton and Middleton 2000, 102, and the Epilogue below. At times, some “client” peripheries were able to threaten their “patrons” or to play off city-states one against the other, by using their rivalry – for example, in 1728, the Oromo sold ivory to Barawa and Pate, whereas their alliance with Pate ought to have given this city a monopoly on ivory supply (Vernet 2005: 288). This does not change the overall, fundamentally unequal structure of these trade and cultural exchanges.

⁷ On an economic level, imported textiles, exchanged for gold by the Portuguese, also played a crucial role on the African Atlantic coast during the fifteenth century. Horses were also exchanged for slaves (Devisse 1972: 386). Devisse (1985: 713 n. 87) also notes that during the thirteenth century, “60% of the customs duties levied at Kilwa came from imported cotton clothes,” but he does not reveal the source of this evaluation. For the period between the sixteenth and eighteenth centuries, T. Vernet (2005: 455) emphasizes the “dependence” of the East African city-states on foreign traders, who brought the textiles the Swahili

Some coastal towns, however, had a genuine capacity for negotiation with foreign merchants; one example was Kilwa, which controlled the gold trade. Elites or groups from the interior could also take advantage of particular situations which were favorable to them. “Allies” from the hinterland had the means to threaten Swahili cities (testimonies concerning the sixteenth and eighteenth centuries are revealing in this regard). “Aggressions” were more frequent during periods of economic recession or of ecological and social crisis, when groups from the interior were tempted to take by force what they could not obtain through exchange (as we have seen, an alliance–aggression sequence was a cyclical process, well known in Asia between nomads and sedentary populations, at various times, although we must remember that in Asia, aggressions were often directed from dominant cores). Inland societies were also able to either play off competing Swahili towns or take advantage of political struggles in these cities.⁸ Coastal cities attempted to secure alliances with foreign merchants and to take advantage of possible competition among them. This strategy helps us to comprehend the religious changes we observe in Kilwa between the eleventh and fifteenth centuries, at a time when its rulers hewed to various different schools or branches of Islam; these changes also reflect struggles for power among aristocratic groups relying upon distinct networks, and the arrival of migrants hailing from various centers of the Islamic world (see below). In sum, we must follow the advice Kardulias (1999) gives us, and carefully consider the processes of resistance and the negotiations in play among the various powers.

Some authors have wondered whether a true hierarchy of the core/periphery type existed between the Swahili coast and the interior. When Sinclair and Hakansson state that “there was no military domination of the inland by [Swahili] cities,” they fail to point out that cities used their coastal allies for operations in the interior. In fact, clientelistic networks were crucial for trade between the Swahili cities and the hinterland.⁹ “Unequal exchange could possibly have taken place,” add Sinclair and Hakansson, “because the coastal core could have exchanged something with little labor per unit, such as cloth, for such comparatively labor-intensive interior goods as foodstuffs, metals or ivory. However, such an analysis is made difficult because of a discrepancy in their economic systems, where cloth and beads were valued as media of exchange in the interior, while ivory was worthless.”¹⁰ Sinclair and Hakansson here repeat an argument made by Pearson (1998: 114, 116; see below). On the contrary, it appears that the discrepancies between use values (the lack of usefulness of raw goods exported from peripheral societies on the one hand, and the desirability of manufactured products on the other) as well as differences in level between societies involved in trade, are all precisely crucial factors in the building of an unequal exchange (see the

needed in order “to maintain links with groups in the hinterland who provided grain, cattle, ivory and slaves.”

⁸ As we see at the beginning of the sixteenth century in the case of Kilwa (Pearson 1998: 74).

⁹ The Swahili do not appear to have traveled much to the hinterland, unlike the Muslims of northern Africa. This was not solely due to the lack of navigable rivers (except the Zambezi and Limpopo), despite A. Wink’s opinion (2004: 17).

¹⁰ Sinclair and Hakansson 2000: 475. In contrast, A. Velho, who was the first to recount Vasco da Gama’s first voyage, notes that the inhabitants of Sofala wore daggers, “the sheaths of which [were] made of ivory” (Newitt 2002: 2).

Epilogue below). While pointing out that “the effects of trading activities seem to have undermined the risk-buffering networks of the farming communities” in northern Mozambique,¹¹ Sinclair and Hakansson state that trade nonetheless stimulated local production inland. But what kind of production did this trade involve? We hear mostly of gold extraction, elephant hunting, and raids launched to capture slaves. Except for regions benefiting from a certain amount of coevolution with the cores, thanks to particular assets in expertise and resources such as stockbreeding, metals, and men, trade in peripheral societies mostly “stimulated” an exploitation of the environment (timber production leading to the destruction of mangroves is one example); it also, and to a still greater degree, led to the exploitation of people who were not part of the elites in trading societies. Trade was embedded in economic as well as political and ideological power relations. Foragers providing ivory and animal skins were probably kept in perpetual debt through advances of imported products, as Morrison describes with reference to South India, where foragers became specialized in a few types of activity.¹² We know that in the Mutapa state, during the sixteenth century, some men specialized in elephant hunting (Beach 1994: 73). In the Congo’s Soyo province, as well, certain chiefs had hunters who were affiliated with them for elephant and leopard hunting (Ekholm 1972: 124).

The form of trade that best indicates the direction of exploitation and the presence of a chain of dependency is the slave trade. While this trade probably declined following the Zanj revolt in Iraq in 868, it did continue over the centuries. From the tenth century onward, slaves were usually destined for household chores, harems, and military careers, and not so much for agricultural labor. Al-Bīrūnī mentions the export of slaves from East Africa toward Sind and other regions in India during the eleventh century.¹³ Idrīsī reports raids carried out by the ruler of Qays, an island located at the entry of the Persian Gulf, in order to acquire slaves:

The Zeng country has a very large population, but does not have significant means of defense, and the ruler of the Qays peninsula in the Arabian Sea carries out frequent raids in the Zeng country, with his fleet, in order to capture and bring back a large number of these natives, as slaves. (Idrīsī, eighth section, p. 61, Viré 1984: 20)

The dispute that arose between Aden and Qays in 1130 “may have been about control” over the East African slave trade (Horton 1996: 415; see above). Idrīsī signals that “black slaves were assigned [to guard] the goods [of Yemeni merchants]” (Viré

¹¹ Duarte 1993, quoted by Sinclair and Hakansson 2000: 475.

¹² Here too, unequal relations were established with various groups in intermediary positions between states and hunter-gatherers, groups that were used by the states. “Relations of debt were developed which kept foragers perpetually in hock to intermediaries who supplied them with advances of lowland goods and collected from them pepper, cardamom, dyes, resins . . . and other forest products. Many of these intermediaries were licensed by indigenous and later, colonial governments in a system of tax farming analogous to forms of extraction also employed against agriculturalists” (Morrison 2006: 294–295).

¹³ Sachau 1962: 263. According to al-Bīrūnī, there was a great demand for these slaves from the Zanj country and al-Waqwaq. Ibn Butlān, a physician living in Baghdad during the eleventh century, praises the qualities of the Zanj men as workers, servants, and eunuchs; in contrast, he states that the women of these countries “show all kinds of evil tendencies and the more black they are, the more ugly they are and the more aggressive their teeth are” (reference to the practice known in East Africa of filing some of the front teeth).

1984: 23). Ibn al-Mujāwir (thirteenth century) also mentions the presence of Zanj slaves at Aden. ‘Abd al-Rahman ibn al-Jawzī (1116–1201) writes of black slaves at Baghdad (Sheriff 2005: 20). As pointed out above, East African slaves could be found throughout the Indian Ocean and as far as China as early as the Tang period. Lovejoy (2000: 25) gives an estimate of 1,000 slaves per year on average for the slave trade along the East African coast between 800 and 1600, but this assessment appears to be too low.¹⁴

After mentioning Zanzibar and Kunlun *cengki*, which is probably Madagascar (see below), Zhao Rugua describes another island on the East African coast whence slaves departed:

In the West, there is an island in the sea on which there are many savages, with bodies as black as lacquer and with frizzled hair. They are enticed by offers of food and then caught and carried off for slaves to the Dashi countries . . . where they fetch a high price. They are used as gate-keepers.

Here Zhao Rugua quotes Zhou Qufei, who added that “thousands and tens of thousands of people who were sold as slaves” departed from this island – which is not precisely located – bound for overseas countries. According to Idrīsī (1, 58) also, Arabs from Oman kidnapped children by offering them sweets [dates] (Viré 1984: 20). Idrīsī also writes about an “Island of Monkeys” some two days distant from the East African coast: “the inhabitants of the islands of Khartan and Martan (Kuria-Muria, in the Arabian Sea) capture the monkeys by ruse and sell them in Yemen, where they are used as slaves. The people of Qays and Socotra are great slave traders” (Hirth and Rockhill 1911: 150, quoting Idrīsī, 1, 61).

Ivory was the first export from Swahili ports, however. Expanding trade via the Red Sea from the tenth century onward explains the development of ivory crafting in the Mediterranean during the tenth and eleventh centuries, in Egypt (Cairo), northern Africa, Sicily, Andalusia, and at Byzantium, where a true “explosion” of this craft occurred during the mid-thirteenth century (Horton and Middleton 2000: 79–81). Pearson suggests (1998: 84) that the southern regions of East Africa may have exported most of the ivory. Elephants were also hunted in the north; tusks must have been transported by water or by land, brought by hunters or slaves sent to the coast.

Besides ivory and slaves, the East African coast may have exported iron. Idrīsī points out the significance of this export for the Sofala coast, in relation to the Comoros, Madagascar, and India.¹⁵ Muslim merchants of various origins may have participated in this iron trade between East Africa and India (Lombard 1980: 196). In addition, Idrīsī signals that, further north on the African coast, the iron trade was conducted by people from Malindi. In the vicinity of this city, according to Idrīsī, “the [Zeng] exploit iron deposits and process ore; the major part of their revenues and exports come from this [work]” (Viré, 1984: 19). However, Idrīsī never traveled to East Africa, and Killick has cast doubt on the veracity of this testimony concerning the significance of iron exports from the Swahili coast (2009, see above).

¹⁴ It is estimated that an average of 2,000 slaves per year transited via the ports of the Red Sea, while between 3,000 and 8,000 slaves were taken to the north and the east via trans-Saharan routes. However, it is difficult to quantify the slave trade from the East African coast (see Sheriff 2005: 14, 21).

¹⁵ See below on the activities of the Austronesians in the western Indian Ocean.

Gold exploitation in the Limpopo region and Zimbabwe acquired a significance that would grow over the centuries. Linked to communities belonging to the Leopard's Kopje culture, which displaced or absorbed the Zhizo populations, major centers emerged from the beginning of the eleventh century in the Limpopo valley. These included Bambandyanalo, at a site labeled K2 by archaeologists (1010–1220),¹⁶ which was the center of a large chiefdom, and more importantly Mapungubwe (1220–1280), the capital of a kingdom which installed a tributary system (Pikirayi 2001). Class distinctions become evident from c. 1150 CE onward (Huffman 2009). The king acted as “rain maker,” which explains the village's placement atop a hill. The emergence of these centers was linked to the exploitation of metal resources (copper, tin in the south, and gold in the south and the north) as well as ivory¹⁷ exports on the one hand, and an expansion in stockbreeding, on the other (Beach 1994; Insoll 2003). The elites of these kingdoms appear to have controlled metallurgical activities (copper, iron, gold) as well as trade with the outside world (Calabrese 2000).¹⁸ Large beads (called “garden rollers”) were produced at K2 by reworking small imported beads. These “garden roller beads” have been found in Botswana, at Tshaitshie (350 km north of K2), at Moritsane (540 km south-west), and in southern Zambia (at Isamu Pati).¹⁹ “The widespread distribution of garden roller beads [produced at K2] along with the concentration of ivory and [imported] glass beads [at this site] show that the Leopard's Kopje capital controlled the interior portion of the coastal trade” (Huffman 2000: 20). Beads were also produced at Castle Rock, a site west of K2 (Wood 2005). The K2 beads were made from a mineral-soda-high alumina (m-Na-Al) glass (and not from a plant-ash glass, like the Zhizo beads); they are of the “Indo-Pacific” type (Robertshaw *et al.* 2010: 1910; Wood 2011: 75)²⁰ and came from South Asia, or possibly Southeast Asia – where they

¹⁶ According to Huffman (2000: 17–18), K2 corresponds to the settlement of a Shona-speaking population, which created ceramics of the Leopard's Kopje type; these Shona displaced the people from Schroda (a site abandoned around 1000) to Toutswemogala (Toutswe). In the Limpopo valley, the Leopard's Kopje culture developed sizeable sites featuring central enclosures for cattle. Curiously, Pikirayi (2001: 110) states that the Toutswe chiefdom was not involved in Indian Ocean trade; in fact, glass beads (including “garden rollers” from the Limpopo valley) have been unearthed at Toutswemogala, as well as at Bosutswe, in the northwest, at Taukome, in the west (see above), and at Kgaswe (thirteenth century), in eastern Botswana (Wood 2005: 44); various sites also show ivory working. In addition, a chiefdom belonging to the Leopard's Kopje tradition emerged in the Shashe valley, north of the Limpopo, as early as the end of the first millennium; the site of Ntabazingwe has revealed links with Indian Ocean networks, as the discovery of glass beads shows (Pikirayi 2001: 109).

¹⁷ See Horton and Middleton 2000: 98 (map 5.1), 100–101; Huffman 2000: 19.

¹⁸ The link between metallurgy and power can already be seen at Schroda. Metallurgy has not merely economic significance, but also a symbolic dimension. We have evidence for ironworking in the Acropolis of Zimbabwe, where metallurgy was probably controlled by the king (Childs and Herbert 2005: 293).

¹⁹ Wood 2000: 81. The tomb of a child in the kraal at Moritsane has yielded 700 glass beads that are dated to the thirteenth century. Beads have also been found in Botswana for a period between the tenth and twelfth centuries (see above). Several sites in Zimbabwe have revealed imported glass beads; one example is Doddiburn (tenth–eleventh century), a Zhizo site (Huffman 2000: 20).

²⁰ Wood (2011: 76) makes a distinction with the “East Coast-Indo-Pacific series” on the African coast. These beads were also produced in South and Southeast Asia, but they are slightly larger. They are drawn beads, and “the technique used to make these beads is a technology from South Asia” (Wood (2011: 76). Excavations at the K2 site have also revealed East Coast-IP beads (1215, and 3433 beads belonging to the K2 series). K2 beads were mainly blue-green. Yellow and green beads from the East Coast-IP series

were no longer produced after the thirteenth century. Their appearance reflects a change in the trade networks of the Indian Ocean linked to this region of East Africa. Indians of the Chola Empire and perhaps Indonesians may have been active on these networks. Few K2 beads have been found at East African sites, where the East coast-IP series dominates. “The differences in bead assemblages between the two regions suggest the two bead series arrived on Africa’s coast via different routes” (Wood 2011: 76). The same can be said for the Zhizo series and the Mapungubwe Oblate series. These beads appear to have been traded via routes that crossed “the southern Indian Ocean more or less directly from South or Southeast Asia” (Wood 2005: 223).

Around 1220, the court moved from K2 to Mapungubwe, where the king and his followers settled on the top of a hill.²¹ The site had between 3,000 and 5,000 inhabitants. Until then, gold had been a means of exchange more than a symbol of wealth, but at Mapungubwe, royal tombs have yielded gold, especially a wooden scepter covered in gold leaf, a golden rhinoceros (made of gold foil tacked with minute pins around a wooden core), and a golden bowl. Curiously, the rhinoceros has only one horn, and thus appears to depict the Asian species (see Fauvelle-Aymar 2013: 182). One of the tombs contained 12,000 gold beads. Cowries and glass beads have also been excavated in great quantity.²² Beads from Mapungubwe belong to “an unusual plant-ash-lime silica glass . . . They may come from southern Asia [Gujarat?], but from an area distinct from the area where the earlier Indo-Pacific glasses were made” (Robertshaw *et al.* 2010: 1907; Wood 2011: 76): this development reveals a new change in the trade network.²³ Black was now the most popular color for beads (83 percent of the beads). Interestingly, “brass beads have been found in early second millennium AD deposits at the sites of Phalaborwa, Parma and Mapungubwe in South Africa” (Miller 2001, 2002: 1127), which implies connections with Indian networks (Thondhlana and Martín-Torres 2009: 92). Contrary to previous accounts, neither K2 nor Mapungubwe has

“arrived in the Limpopo region almost as early as the K2-IP beads.” The brownish-red beads of the East-Coast-IP series “post-date Schroda. The black ones did not appear until late in the K2 sequence” (Wood 2011: 76). L. Dussubieux *et al.* (2008) show that from the ninth century onward, India (especially from Chaul and Cambay) exported beads to East Africa that were made of soda-alumina glass characterized by high uranium and low barium concentrations. The composition of glass from East Africa and from Sumatra reveals two different origins in South Asia (Dussubieux 2010).

²¹ On this hill, the king may have conducted rituals destined to bring rain, with the royal ancestors interceding with the supreme God. According to Huffman (2000: 14–15), this may have been an ideological innovation accompanying the emergence of an elite at Mapungubwe. This elite expressed the existence of a new social order in space organization. To the northwest of Mapungubwe, the Mapela site also reveals the existence of a stratified society.

²² Huffman 2000: 21. Glass beads probably covered some clothing or items of clothing. The 26,000 beads found in Tomb 14 must have been contained in a bag. Control over gold exports by the elite within the context of expanding trade led to a change in the status of gold: originally, gold had had no special value in the East African societies, whereas copper had had a superior status.

²³ The beads in Mapungubwe are usually smaller than the beads found along the East African coast. Beads similar to the Mapungubwe series, however, have been found in small numbers at Kaole, Chwaka, Mafia, Gedi, Mwana, Shanga, and in Madagascar (Mahilaka). They are extremely rare at Kilwa (Wood 2005: 186).

revealed beads of Chinese origin.²⁴ The Mapungubwe Oblate series is rare along the East African coast and at Mahilaka (northwestern Madagascar). While some researchers have suggested Indonesian voyages to the region of Cape Delgado (the northernmost point of Mozambique) by way of the southern Equatorial Current, or even to the East Malagasy coast, and then on to Mozambique via the southern end of Madagascar, this route remains hypothetical (Wood 2005: 201). Mapungubwe beads are found in numerous sites in Zimbabwe²⁵ and Botswana.

It is possible that the elite at Mapungubwe partially controlled gold production, as would be the case in Zimbabwe during the fourteenth, fifteenth, and sixteenth centuries. Most gold, however, probably came from the Woolandale region, in the northwest. The development of Mapela (thirteenth century), which probably acted as intermediary between Mapungubwe and Woolandale, appears to be significant. This site, which has yielded a large number of glass beads,²⁶ was abandoned at the same time as Mapungubwe. Mapungubwe has also yielded two shards of celadon, and cowries (Swan 1994). The trade networks of this kingdom extended as far as Botswana: beads have been unearthed at Bobonong Road (van Waarden 1998: 119).

Scholars are still debating the reasons behind the development of states in the Limpopo valley: various authors have emphasized the significance of stockbreeding, facilitated by a wetter climate between 900 and 1290 (Beach 1994: 70; van Waarden 1998: 116), for the states in the Limpopo valley and the kingdom of Great Zimbabwe (Garlake 1978). Other researchers have pointed out that progress in stockbreeding was not unique to these regions. The emergence of a highly stratified society appears to be linked to expanding trade: “coastal trade generated considerably more wealth than was possible through cattle.” Trade wealth contributed to the growing political power and social hierarchization that went along with the state’s new military capacity (Huffman 2000: 25, 2009). Horton and Middleton also note (2000: 100) that “Indian Ocean trade was one significant factor in the development of stratified societies in the Limpopo valley between 800 and 1300.”²⁷ Imported goods were a new form of wealth, one that could be stored and distributed differently than wealth gained from livestock (Pwiti 2005: 386). Control by the elite over both the importation and redistribution of luxury goods strengthened hierarchical relationships. Portuguese accounts during the sixteenth century show a correlation linking livestock, gold exploitation, and luxury goods, on the one hand, and the political power of the elites, on the other (see below). Moreover, the presence of spindles at Mapungubwe reveals the introduction of a cotton spinning and weaving industry, from the coast. Textiles were probably used

²⁴ Mapungubwe has yielded shards of Song porcelain. The tomb of a child, at Bambandyanalo, dating to the Mapungubwe period, contained hundreds of glass beads, including seven large turquoise beads that had been considered as possible Chinese imports (Wood 2000; Mitchell 2002: 306). During the Southern Song period, China exported large amounts of beads to Southeast Asia.

²⁵ The glass beads found at Mbagazewa (northern Zimbabwe) – dated to the thirteenth century – may belong to the Mapungubwe Series. On Mbagazewa, see Pikirayi 2001: 161.

²⁶ Van Waarden 1998: 122–123. Mapela shows walled terraces, a feature observed at other sites in the region of the Woolandale chiefdom. In this region, glass beads became more common during the thirteenth and fourteenth centuries.

²⁷ Moreover, demographic growth can be seen in the Limpopo valley during the thirteenth century, revealing agricultural progress.

for exchanges with the interior. Mapungubwe has not yielded any ivory work, however, unlike the Toutswe sites of the same period. In a different analysis, Swan has recently put forward the idea that social complexity and political centralization developed in parallel to a rising copper trade in the African interior, at a time when exchanges with the coast were still rather limited. For Swan, “the idea that long-distance trade contact was the initial stimulus to the emergence of political centralization in southern Africa is being reconsidered” (Swan 2007a: 1006).

It is therefore difficult to know to which type of “secondary states” (see Parkinson and Galaty 2007) the policies of K2 and Mapungubwe belong, but it does seem that “rare imported goods stimulated the economy of societies where the seeds of social hierarchy were already present” (as early as the first millennium) (Insoll 2003: 366; Swan 2007a). The spread of copper ingots (prestige goods and money used for various transactions) at the beginning of the second millennium reveals regional developments that were perhaps not initiated, but certainly strengthened by trade contacts with the coast. Trade in HIIH copper croisettes, symbols of prestige, extended between the twelfth and fourteenth centuries, from the Zambian “copper belt” to the north (Upemba basin), the east, and south, under no obvious influence from the ocean trade. The use of HIIH-shaped ingots reached the Zimbabwe region during the thirteenth–fourteenth century, before the appearance of ingots of the HRX type (Swan 2007a: 1003), revealing the existence of trade with the north. Copper croisettes of the HIIH type “may have been the first widely recognized currency . . . , initially in the Copper Belt region from the ninth to the twelfth centuries in the Zambian copper belt, then on a broader scale from Congo to Mozambique until the late fourteenth century” (Swan 2007a: 1008). Beach (1994: 70) also notes the appearance of a string of states – between the Great Lakes and regions further south – whose emergence does not appear to be closely connected to “external capital” arising from oceanic trade (see also Coquery-Vidrovitch 1993: 83–84).²⁸ The same can be said for the Kongo kingdom in its early stage (Ekholm 1972). Before the sixteenth century, “the aristocracy of this kingdom had based its power on control over the regional trade in iron, salt, ivory, loincloths, and over an interregional slave trade” (Coquery-Vidrovitch 1993: 97), with no obvious connections to the Afro-Eurasian world-system.

The site of Mapungubwe was abandoned at the end of the thirteenth century, due to climate change, according to Huffman (1996). The center of power also shifted toward regions where gold deposits were the richest. Better situated for gold production and for interconnections with Indian Ocean trade routes, the state of Great Zimbabwe then rose to preeminence.²⁹

²⁸ A Chwezi kingdom appeared during the fourteenth century in northern Uganda and northeastern Rwanda, ruled by an aristocracy whose wealth was based on livestock. It developed fortified centers such as Bigo and Kabengo. During the fifteenth and sixteenth centuries, the Bunyoro, Ankole, Buganda, Rwanda, and Burundi kingdoms took shape (Coquery-Vidrovitch 1993: 83). Munsa (southeastern Bunyoro) also shows earthworks on a grand scale dated to the fifteenth–sixteenth century.

²⁹ It is remarkable that the Toutswe sites of the interior (Botswana) and the center of Mapungubwe declined at the same time (c. 1300) (Horton and Middleton 2000: 100; Pikirayi 2001: 110). T. N. Huffman puts forward climatic causes and refutes the idea of competition between Mapungubwe and the incipient state of Zimbabwe (2000: 24). During the late thirteenth century, and until the early fifteenth century, southeastern Africa experienced a drier and cooler climate than during the period between the tenth and

It is possible that this state was founded by a dissident branch of the ruling elite from Mapungubwe (Huffman 2010), although the site of Great Zimbabwe may date to the twelfth century. The development of Great Zimbabwe is shown by an increase in discoveries of glass beads and other imported items between the Zambezi and Limpopo valleys. The beads that M. Wood refers to as the “Zimbabwe series” are chemically similar to those of the Mapungubwe series, but with higher P_2O_5 , BaO and Na_2O levels, and lower MgO levels (Wood 2011: 77). Beads have been excavated in the Mateke hills, at Malumba (eleventh–fourteenth century) and at Mwenezi Farm (twelfth–thirteenth century?) (Pikaryi 2001: 117). Further north, near the Zambezi, glass beads have been excavated at sites dated to the thirteenth century; these sites appear to have been centers of chiefdoms, for example at Mbagazewa (a cemetery) and Wazi Hill, where spindles also signal a textile industry (Pikaryi 2001: 161). These sites in northern Zimbabwe also reflect the increasing significance of the copper trade. Beads of the “Zimbabwe series” have been found in Botswana, in southern Africa (site of Thulamela), in Madagascar (Mahilaka), and in small numbers along the East African coast (Wood 2011: 77). They may have come from India or Southeast Asia (Robertshaw *et al.* 2006):³⁰ it is possible that India had already captured a significant part of the gold exported. Stone walls were built at Zimbabwe (Zimbabwe translates as “house of stone”) from the thirteenth century onward. The simultaneous decline of the Limpopo sites and the Zimbabwean rise to power, and the coincidence of this rise with the peak of growth within the world-system, all show how crucial long-distance trade networks were to these processes³¹ – in which an expanding gold trade played a prominent role. Between Chibuene and the region of Great Zimbabwe, a site has been found at Manyikeni that may have served as a “trading post” (dated to c. 890 CE for its oldest layers). This site has yielded a celadon shard, Chinese blue-and-white ware, glass beads of the Indo-Pacific type, and shells (Horton and Middleton 2000: 101; Sinclair 2008). In addition, regional trade in copper increased at this time (Pikaryi 2001: 123; Swan 2007a). Besides long-distance and regional trade, local factors also contributed to the development of social complexity (wealth in cattle – of both economic and symbolic importance –, social institutions, and ideology) (Garlake 1978; Beach 1994: 90; Pikaryi 2001: 113). Vogel (1990) has pointed out the importance of religious ideology as an integrating component; at Great Zimbabwe, birds carved in steatite surmount posts, likely symbolizing the king’s mediating power, implemented in his relations with the divine and the foreign world.

thirteenth centuries; the Zimbabwe plateau may have been less affected than the Limpopo region, but this remains to be determined. Moreover, Voigt (1983) notes that for the first time in southern Africa, the remains of rats dated to the thirteenth century have been found in the Limpopo valley: this author suggests that plague may have struck this region. A shift in trade routes further north suggests another explanation for this decline of the political entities of the Limpopo region and Botswana.

³⁰ Surprisingly, as the authors note, “little seems to be known about plant-ash glass in South Asia during the 2nd millennium” (Robertshaw *et al.* 2006: 106).

³¹ Huffman (1990, 2000) as well as Horton and Middleton (2000) contradict M. N. Pearson’s statement (1998: 120) that “the rise and fall [of the Limpopo] states were not very much connected to the rise or decline of external trade.” It is true that climatic changes and environmental problems also influenced the decline of these states.

East Africa exported other goods besides gold, ivory, and human beings. For the coast of Berbera (called Bipalo), Zhao Rugua mentions ambergris, rhinoceros horns, turtle shells, putchuk [?] (a product from India; see above), storax gum, and myrrh (Hirth and Rockhill 1911: 128). Rock crystal should also be mentioned: beads made of this stone have been recovered at Shanga, with the beads sometimes unfinished. “Nasr-i Khusrau who saw crystal vessels in the Cairo market in 1046 and 1050 remarked that the material came from East Africa” (Horton and Middleton 2000: 80). Items made of rock crystal have been found in Cairo dated to the tenth and eleventh centuries, “after which the supply of crystal seems to have dried up.” While M. Horton locates the origin of rock crystal in the African interior, perhaps in the Tsavo region, C. Allibert has suggested a Malagasy origin, via the Comoros (see above). Al-Birūnī writes of rock crystal coming from the islands of the Zanj. Fragments of rock crystal have been excavated at Kizimkazi, on Zanzibar (Kleppe 2007). Chlorite-schist vessels from Madagascar have been found at some East African sites: at Manda (fourteenth/fifteenth century), Kilwa, Pemba (Mtambwe Mkuu, Mkia wa Ngombe), and – in smaller quantities – at Shanga.³²

Historical sources (Arabic, Chinese) tell us which products were the most coveted; sometimes they also describe the trade modalities along the African coast; they mention the existence of temporary camps where merchandise was exchanged; the constitution of caravans that traveled to the interior of the continent; the practice of “blood alliances,” and the support of foreign merchants by local people, who protected them and facilitated their business transactions while at the same time limiting their freedom of action. Yāqūt and Ibn Battūta note that in Mogadishu, during the thirteenth and fourteenth centuries, a foreign trader was supported by a household of the city. Ibn Battūta describes how Swahili merchants acted as trade intermediaries. “The host then sells his goods for him and buys for him, and if anyone buys anything from him at too low a price, or sells to him in the absence of his host, that sale is held invalid by them. This practice is a profitable one for them” (Ibn Battūta 1959, 11: 374). This type of relationship was not a personal one, as Middleton (1992) argues, but rather a trade relationship involving one household (a lineage specialized in commerce) and a single foreign merchant. Only lineages considered as “elders” could support foreign merchants and trade with them (Horton 1996: 413). This rule remained in effect on the Swahili coast until the nineteenth century. From the fourteenth century onward, the stone houses of the aristocrats included specially constructed guest rooms (Horton and Middleton 2000: 91). Moreover, on the coast of Mozambique, according to al-Birūnī, due to the fact that

the seagoing merchants do not trust the Zabaj [Malagasy? Comorians?] and the Zanj, the chiefs and elders come and offer themselves as hostages . . . Then the goods which their people desire are handed over to them for them to take to their land . . . After that they go out to the deserts to seek the price and each one of them finds in those mountains only as much gold as is proportionate to the goods which have fallen to his share . . . They deliver it to their ships [and] the hostages [are freed]. (Horton and Middleton 2000: 101)

³² Chittick 1974, 11: 412–413, 1984: 194; Horton 1996: 354; Fleisher 2004a: 323–324.

The products imported were primarily textiles, as has been pointed out, as well as beads and ceramics. Egypt, prior to India, may have been the main exporter of textiles to East Africa, and Allen has suggested that the name “WaMisri” for various groups living all along the coast refers not to an Egyptian origin of their ancestors, but to the activity of traders in Egyptian fabrics (Allen 1993: 59). India grew increasingly prominent in the textile trade from the thirteenth century onward. The book by Zhao Rugua says this about Zanzibar:

[The inhabitants] of this island, located south of Huchala [Gujarat], are of Dashi origin [Arabs] and follow the Dashi religion [Islam]. They wear imported blue cotton cloths and red leather sandals . . . Each year, Huchala and the ports of the Dashi coast [Arabia] send ships with white cotton, porcelain, copper, [and] red cotton. The products of the country consist of elephants’ tusks, native gold, ambergris and yellow sandalwood. (Hirth and Rockhill 1911: 126)

Gold probably came from Zimbabwe, “yellow sandalwood” from Madagascar, and ivory from various places along the coast.

Glass beads were imported in sizeable amounts from 1050 onward and they have been found in abundance dated to around 1300, for example at Kilwa. Beads of the “Indo-Pacific” type came from the Coromandel coast, and perhaps (prior to the thirteenth century) from Southeast Asia. Evidence for beads of Chinese origin is very limited for this period,³³ but rare lead-silica beads have been found at some sites along the east coast; these probably originated in China. One has been excavated in Great Zimbabwe.

Trade and military alliances between the Swahili towns and groups settled in the hinterland nearby acted as intermediaries with the interior of the continent and ensured a supply of products destined either for export or for local markets. Such alliances may have been built with pastoralist groups (Proto-Segeju?) appearing between the tenth and twelfth centuries in the northern Swahili region (as far as Gedi). These groups manufactured a type of pottery decorated with wavy lines that has been found at Shanga.³⁴ Unfortunately, finds of material imported from the coast to the hinterland are sporadic: fabrics, which ought to have made up most of these imports, have not been preserved in the tombs, and only a limited number of excavations have been conducted in the hinterland. Discoveries have been made along the Tana River, including glass beads, beads made of aragonite, copper chains, and ceramics (Abungu and Mutoro 1993: 703); in South Pare (glass or shell beads, and cowries dated to the first half of the second millennium), and in North Pare (glass beads, and a few shards of coastal pottery, dated to between the eighth and thirteenth centuries) (Sinclair and Hakansson 2000: 473). In the Upemba basin, west of Lake Moero, cowries have been recovered in tombs dated to the tenth through

³³ Wood 2000: 87. The origin of various types of beads found along the East African coast remains uncertain or unknown.

³⁴ Horton and Middleton 2000: 96–97. More recently, the Digo and the Segeju (non-Swahili groups) were present at the enthronement of the ruler (*diwani*) of the Vumba state (seventeenth–nineteenth centuries), which took place near the grave of the founder. They swore to defend him and “in return they were given large quantities of cloth” (Horton and Middleton 2000: 168). The various clans of a city did not necessarily have the same alliances with external groups, be they continental or maritime (see Vernet 2005: 413 on Pate and Mombasa during the seventeenth and eighteenth centuries).

thirteenth centuries.³⁵ The Munsa site (Uganda) has yielded blue-green glass beads dated to between 900 and 1200 (Robertshaw 1997: 13; Insoll 2003: 377).

The growing prosperity of the Swahili culture was based, not only on trade and crafts, but also on the intensification of fishing³⁶ – with increases in offshore fishing (Fleisher *et al.* 2015) – and agriculture (with a significant place reserved for banana plantations, in what Ehret has termed a “mixed Afro-Indonesian agriculture” [1985: 525]). Animal breeding developed in some regions of the interior. The global climate change occurring from the tenth century onward, marked by an increase in monsoon rainfall in the Indian Ocean,³⁷ probably spurred the agricultural growth and the demographic upsurge observed along the East African coast and also in Madagascar,³⁸ along with urban development.

The period between the tenth and fourteenth centuries was characterized by the growth of cities and by major transformations along the entire coast, with “increasing maritimism” and urbanization (Fleisher *et al.* 2015). New sites appeared, and average community size increased. The number and significance of the settlements’ installations, between the eleventh and thirteenth centuries, shows a ratio of four to one over the previous period, and the development of “stone houses” built of coral, particularly along the northern Swahili coast.³⁹ These houses included guest rooms and storage rooms, and there is later evidence that a certain amount of manufacturing went on in some of them (see below). Coral was also used to build causeways, for example at Kilwa Kisiwani (Fleisher *et al.* 2015). On the other hand, “three important settlements were abandoned or depopulated by CE 1000: Unguja Ukuu, Chibuene, and Tumbe” (Fleisher *et al.* 2015). Other sites, such as Shanga, experienced disruptions that were probably linked to political and religious changes. Manda covered approximately ten hectares; the western part of the site, near the port, has yielded the remains of sizeable buildings showing masonry work (Chittick 1974: 19–35). Several small villages have been recognized in connection to the Shanga site. Lamu, Faza, and Siyu may have been founded at the beginning of this period (or possibly earlier).⁴⁰ Cities were settled along the coasts of

³⁵ Tombs belonging to the Classic Kisalian period (Maret 2005: 434).

³⁶ Fishing was not just for food. Shells were used in the manufacture of ornaments, and also in the production of dyes and perfumes.

³⁷ As mentioned above, these increases in temperature and rainfall largely explain the rise of agrarian states in Pagan (Burma), Angkor (Cambodia), and Dai Viet (northern Vietnam); these also experienced spectacular demographic growth between the tenth and thirteenth centuries, as did South India and China. Europe also benefited from a favorable climate, as did Egypt, which took advantage of high Nile flooding (Lieberman 2003: 92–93, 104–105, 108).

³⁸ The settlement density in southern Madagascar (Androy), which is today subdesertic, appears to have been significant.

³⁹ Wright 1993: 669–670. For Pemba, J. B. Fleisher (2004a: 406–407) shows a process of urbanization with some depopulation of the countryside and a reduction in the number of sites. Wilson’s model (1982) and that of Kusimba (1999) (see below), both of which signal a growth in number of sites through the creation of daughter-settlements from single centers, should be placed in perspective. Pemba offers the example of competition between emerging centers for which control over the population was more important than control over a territory (Fleisher 2004a: 410ff.).

⁴⁰ Horton 1996: 24–25. Urban prosperity resulted not only from the flourishing of existing settlements (Shanga, Kilwa) but also from the creation of new sites (such as Kaole, Kizimkazi, and Chwaka) (Fleisher 2004a: 60).

Zanzibar (Kizimkazi and Mkokotoni [during the fourteenth century]),⁴¹ on the small island of Tumbatu (Jongwe) (northwest of Zanzibar), and on Mafia (Kisimani Mafia).

South of Mafia, Kilwa controlled the Sofala gold trade, and came to prominence from the twelfth century onward. The city covered 30 hectares during the eleventh century, with some of its houses on stone foundations. During the thirteenth century, some buildings were constructed using coral blocks, and lime kilns have been unearthed there. The sultan of Kilwa issued coins, probably using a trimetallic system mentioned in an eleventh-century Chinese description (Horton and Middleton 2000: 92). Use of this coinage was primarily regional, although a few coins have been found near Salah, in Dhofar (Insoll 2003: 144). Barros indicates that people from Kilwa took control of the Sofala trade at the expense of people from “Mogadoxo,” a name which may refer either to Mogadishu, or to Madagascar. The copper and gold of the Kilwa coins came from Zambia and Zimbabwe, via the Sofala coast. One may question whether cowries were used as currency before the appearance of coinage; although Chittick (1974: 236) does not really believe in this use of cowries, he does signal that “they became much scarcer after coinage was introduced” (Allibert 2000: 71).

An island close to Kilwa was home to another city, Sanje ya Kati, which has yielded the remains of a mosque dated to the eleventh century as well as stone buildings typical of Swahili houses (Pradines 2009).

Further north on the African coast, Malindi, Mombasa, and, more importantly, Mogadishu were also significant cities from the twelfth and thirteenth centuries onward.⁴² According to Yemeni sources, during the thirteenth century, ships from Mogadishu made annual trips to Aden, al-Shihr, and other Hadramawt ports. The Swahili cities were home to mixed and hierarchized populations,⁴³ with groups specializing in various types of activities. Horton has pointed out this situation at Shanga, with rectangular houses in the east and round houses in the west, and spatial distribution arranged according to the cardinal points among four social groupings, each carrying on a different activity (Horton 1996: 411, 420).

The Swahili cities were not only centers for production and exchange, but also ritual places where Islam played an increasing role (Wright 1993: 671–672; Fleisher 2004a: 416, 421). “From around 1200, new mosques were built in many coastal settlements, located as close to the seashore as possible,” providing landmarks for the mariners. “At Songo Mnara, three mosques were built along the seashore and a fourth in the sea itself” (Fleisher *et al.* 2014). From the fourteenth century on, the two key elements

⁴¹ Yāqūt (late twelfth to early thirteenth century) gives Lanjūya as the capital of the king of the Zanj (Yāqūt, however, is mainly a compiler). “Ships make their way to it [Zanzibar] from all quarters. Its people [rulers] have now transferred themselves from it to another island called Tumbatu whose people are Muslims” (Trimingham 1964: 17). The previous “capital” was probably at Kizimkazi, where locally minted copper coins have been excavated, as well as sgraffiato ware (Juma 2004: 20). The site of Unguja Ukuu was reoccupied for a short period from 1050 to 1100.

⁴² Idrīsī writes that the king of the [northern] Zanj lived at Mombasa. According to Horton (2001: 464), based on archaeology, “the town [of Mogadishu] was not established before the 12th century.” However, Idrīsī does mention Mogadishu as a town (see below).

⁴³ Yāqūt writes that Mogadishu has a population mainly composed of foreigners, not of Zanj. Trade there was flourishing, involving “sandalwood,” ebony, ambergris, and turtle shells (Lewicki 1974: 70). Yāqūt also mentions Barāwa, Mombasa, Kilwa, and Sofala.

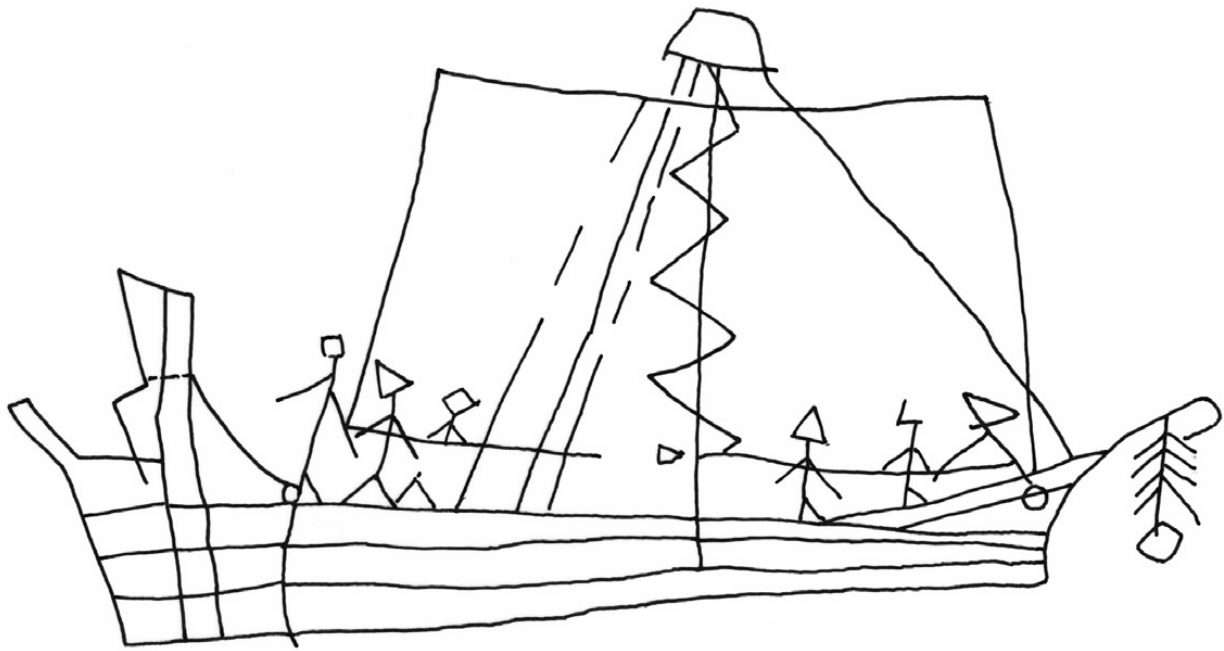


Figure 12.1 Graffito of a *mtepe* ship, in the northern part of the Great Mosque of Kilwa (this graffito cannot be dated) (Chittick 1974)

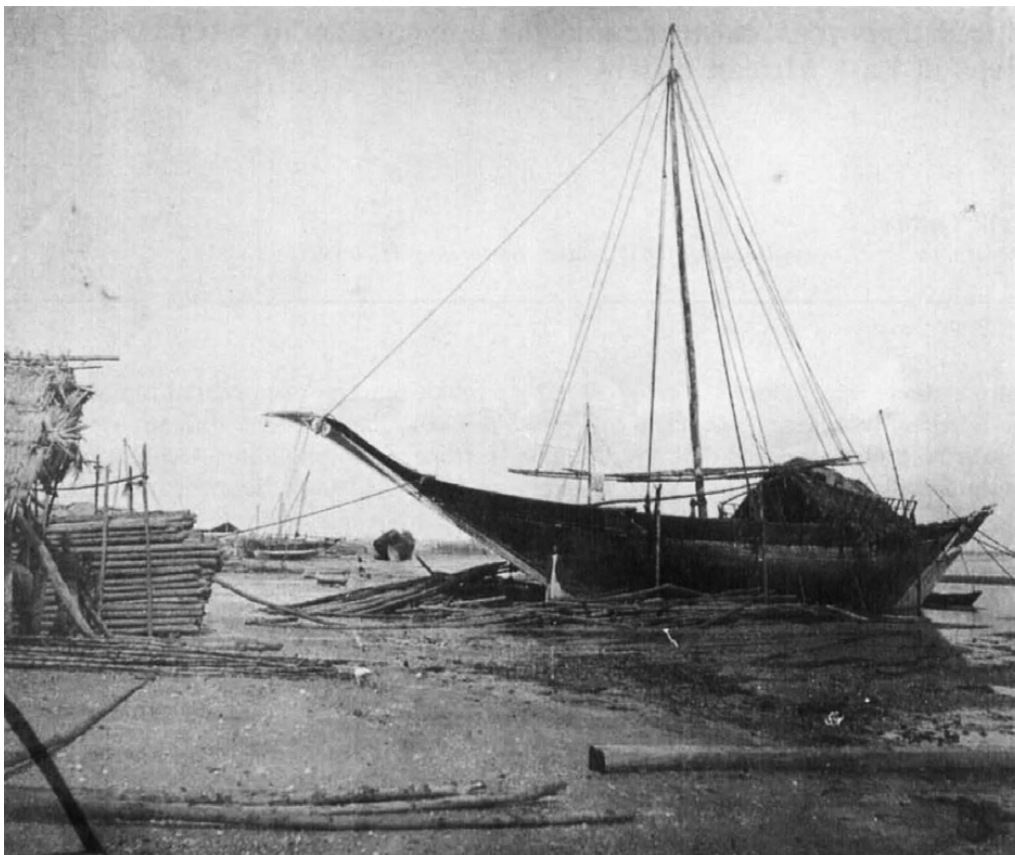


Figure 12.2 *Mtepe* ship on Zanzibar, photograph about 1890, E. D. Ropes (Wikipedia)

underpinning the stone cities' power – long-distance trade and Islam – were both given visual expression when imported bowls and plates were inserted into the walls of mosques and tombs.⁴⁴ Kusimba writes that within a Muslim community bonded in faith and Islamic tenets, one observes an evolution from collectivities based on kinship and ancestor cults toward societies founded on reciprocal obligations (Kusimba 1999: 125). This perspective, however, should be qualified. Pouwels (2000) correctly points out the African character of the Islamic religion which developed along the Swahili coast: it did this by incorporating ancestor and spirit cults, and by mixing local magical practices and Arab magic. On Grande Comore, even today, “the traditional world” takes priority over the Arabo-Muslim religious model (Blanchy 1997, 2000; Pouwels 2000: 254; Chanudet 2001: 198).

The ruling groups of the Swahili cities were usually of Muslim ancestry, originating in Persia or Arabia. Arrivals must have been more or less continuous along the trade networks. Migrations from the main regions of the western Muslim world and India played a significant role in the development of Swahili towns, although perhaps not as crucial a role as has previously been thought.

The Shirazi have often been considered as the main actors in the spread of Islam along the East African coast. It is worth delving into their myth of origin. According to the *Kilwa Chronicle*,⁴⁵ which obviously took ancient trade routes into account, Ḥasan ibn 'Alī, a “sultan from Shiraz,” left Persia with his six sons, aboard seven ships. The first ship stopped at Mandakha [Manda]; the second at Shawghu [Shanga]; the third at a city called Yanbu; the fourth at Mombasa; the fifth at the “green island” [Pemba]; the sixth (guided by the oldest son of the sultan)⁴⁶ at Kilwa; and the seventh (the father's ship) stopped at Hazan [Anzwani=Anjouan, in the Comoros]. Arriving on Kilwa Island, 'Alī ibn al-Ḥusayn found that it was controlled by a pagan king,⁴⁷ who agreed to sell the island in exchange for cloth. According to the terms of the sales contract, 'Alī encircled the island with cloth, “some white, some black, and some of other colors,” a gesture emblematic of a commercial sale, and also a symbolic act marking the “urbanization” of the island and a civilizing process (Horton and Middleton 2000: III).⁴⁸ In order to protect his new domain,

⁴⁴ According to S. Pradines, “the insertion of ceramics into mihrabs and the use of conical vaulting in the mosques of Fakhr al-Din, Mwana and Ungwana reflect decorative traditions that developed in East Africa between the 13th and 14th centuries . . . [These traditions] may have been introduced by Seljukids [?] from the Persian Gulf, at the request of the sultans of Mogadishu” (2003: 359–360).

⁴⁵ The version presented here is drawn from an Arabic manuscript kept by the British Museum and dated to 1867; its composition, however, may date back to the beginning of the sixteenth century (Freeman-Grenville 1975: 34ff.). A shorter version was published by Barros in 1552 (Freeman-Grenville 1975: 89ff.); this is the first known version of the *Kilwa Chronicle* and the Shirazi myth.

⁴⁶ The names of the various protagonists change according to the versions of the *Chronicle*. In Barros's account, 'Alī is given as the oldest son of a sultan from Shiraz called Ḥusayn and a woman of Abyssinian origin (Freeman-Grenville 1975: 89). In some traditions, 'Alī obtains the island, and also marries the daughter of the pagan ruler, after a gift of textiles (Horton and Middleton 2000: 52–53; Horton 2001: 457).

⁴⁷ But the *Chronicle* says that a mosque already existed on the island when 'Alī arrived and met another Muslim there.

⁴⁸ 'Alī was given the name Ngao Nyingi, “Many Clothes” (Freeman-Grenville 1975: 37). In one version of the *Kilwa Chronicle*, the Shirazi founder spread textiles “all along the path the pagan king would take from the city to the continent”; this motif symbolizes the clientelist relations founded on gifts of fabric by the Swahili city to communities in the hinterland (Vernet 2005: 267).

‘Alī “cut a deep channel which created a true island separated from the mainland by Islamic magic” (Horton and Middleton 2000: 53). The founder of the Shirazi dynasty of Kilwa, ‘Alī ibn al-Ḥusayn thus exhibits two major features of Swahili patricians in the eyes of the Africans: the possession of luxury goods from abroad and magico-religious powers connected to Islam. The separation of the island from the continent symbolizes the opposition between the Swahili city and the hinterland (civilization versus barbarism) (Pouwels 1987: 30). The myth of the seven ships carrying six or seven brothers can be found over the centuries, in Shirazi groups, and in groups claiming an Arab origin.⁴⁹

The *Chronicle* reported by Barros gives a date corresponding to 1009 for the arrival of Shirazi at Kilwa. Basing himself on (silver and copper) coins excavated, N. Chittick credits a man called ‘Alī ibn al-Ḥasan with founding the dynasty and suggests a Shirazi arrival during the twelfth or thirteenth century. But a hoard of coins has recently been discovered at Mtambwe (Pemba), buried after 1066. The oldest coins, probably dating to the late tenth century, bear the name of ‘Alī ibn al-Ḥasan, thus establishing the timing of his settlement at Kilwa.⁵⁰ Other coins bearing his name have been found at Kisimani Mafia (Mafia), in pottery of the sgraffiato type dated to c. 1050. The inscription *yathiq b’il Wali* “Trust in God’s lieutenant”⁵¹ on the copper coins issued by Ḥasan ibn ‘Alī (Kilwa) reveals a Shiite influence.⁵² The number seven used for the ships in the Shirazi myth may indicate some links with Ismaili Shiism. Aside from names such as ‘Alī, Ḥasan, and Ḥusayn, other “Shirazi” names are typically Persian, such as Bashat and Bahram; they express connections – impossible to date – with the Persian Gulf.⁵³ Coins thus provide evidence for a Shirazi movement from the Lamu archipelago southward during the late tenth to early eleventh century. The study of all of the coins discovered suggests “familial relationships between rulers/minters in the island towns of Pemba, Zanzibar, Mafia and Kilwa during the eleventh and twelfth centuries, [showing] that a closely related dynasty may have lived on these islands from c. 1000–1150” (Horton and Middleton 2000: 57).⁵⁴

⁴⁹ Linked to the Buyids and populations of the Gulf, the Shirazi myth, according to P. Ottino, “is also the historization (for a period situated between the tenth and sixteenth centuries) of a myth of southern Arabia and the Persian Gulf related to the legendary destruction of the kingdom of Saba in Yemen” (1981: 31). In the Shirazi myth, the sultan dreams that an iron-snouted rat gnaws the walls of the city (in the legend linked to the Sabaeen kingdom, the king of Ma’rib “sees a giant rat with iron teeth and huge claws rolling boulders and undermining the dam” [Müller 1991: 549]). This legend is related by Mas’ūdī and Yāqūt, among other Arabic authors. According to various traditions, the Azd lived in the Sabaeen kingdom, and moved elsewhere after the dam was destroyed.

⁵⁰ Horton 1996: 374, 424. The treasure of Mtambwe Mkuu contained 2600 local silver coins and ten dinars from the Fatimid world or influenced by the Fatimids (Horton and Middleton 2000: 93). The silver coins provide “a link with the Shanga coin series” (Horton 2001: 458). At Unguja Ukuu, four small silver coins have been excavated; their inscriptions, in the Kufic style, mention names seen on other coins found on Zanzibar and at Mtambwe Mkuu (Pemba) (Juma 2004).

⁵¹ *Wali* refers to a person vested with the authority of God.

⁵² According to N. Chittick (1974: 30), also, coins bearing the name ‘Alī ibn al-Ḥasan on one side bear the rhymed formula *Yathiqu bi Maul’l-Minan*, “Confident in the Master of the gifts” on the other.

⁵³ Allen 1993: 187. “The cemetery at Mtambwe Mkuu, which is contemporary to the coins almost certainly issued there, had a predominantly Shi’ite population” (Horton and Middleton 2000: 57).

⁵⁴ According to the *Kilwa Chronicle*, ‘Alī installed his son as king at Mafia.

Architecture also shows evidence of a population movement southward, which is related to the spread of Swahili speakers during the tenth and eleventh centuries (Fleisher 2004a: 57). Horton makes a connection between the Shirazi and mosques with distinctive designs, featuring highly decorated mihrabs made of carved coral, showing trifoliate arches, and bearing inscriptions in Kufic script. Such mosques have been discovered at Kizimkazi (Zanzibar), where the inscription gives the date as 1107, as well as on the island of Tumbatu (c. 1100), and at Kioni (near Kilifi). The Kufic style employed is similar to the script found on gravestones at Sirâf. An inscription on a mosque at Barawa (southern Somalia) which has never been excavated may date to the same period (1104).⁵⁵ These inscriptions, as well as finds of ceramics, are evidence for continued, meaningful contacts with the Persian Gulf. The construction of a new mosque at Ras Mkumbuu on top of the oldest Ibadi mosque could well mark the ousting of the Ibadis by the Shirazi during the eleventh century (Horton 2001: 462–463). These Ibadis probably sailed southward: one notes a strong Ibadi influence at Kilwa from the twelfth through the thirteenth century (see below).

The reference to Shiraz around the eleventh century may appear paradoxical since the Persian Gulf lost its prominence as of the tenth century precisely. Exchanges continued, however, between Persia – where the Buyids turned Shiraz into a flourishing city from 945 to 1055 – and the East African coast; one observes a restructuring rather than a decline of the Persian networks. Idrîsî has noted journeys taken by Omani merchants to the Zanj coast and the Comoros. For S. Pradines, relations between the Persian Gulf and the East African coast remained significant during the eleventh and twelfth centuries: the influence of the Red Sea on this coast during the Fatimid period may have been overestimated. Pradines suggests an “urban model brought by populations from the Persian Gulf,” but the assumption of architectural parallels between Sanje ya Kati and Sharma (South Arabia) would benefit from better grounding (2009: 70–71). According to ongoing studies, bronze coins issued at Sanje ya Kati show Persian inscriptions (Pradines, p.c.). The development of an elaborate stone architecture has often been attributed to the “Shirazi.” This architecture, which appears to combine influences from the Persian Gulf and the Red Sea, developed as far as the Mozambique coast – for example at Somana, south of the Lurio River – where a number of sites dating to the twelfth century have been unearthed (Sinclair 1991: 189–190; Duarte 1993). The introduction of the Persian solar calendar has also been linked

⁵⁵ Horton and Middleton 2000: 61; Horton 2001: 455. According to the inscription at Kizimkazi, the mihrab had been erected by “Sh. Es-Sayyid Abu Musa son of Hasan son of Muhammad.” This Abu Musa may in fact be Musa bin Amrani, to whom the Swahili version of the *Kilwa Chronicle* attributes the Shirazi founding of this city (Freeman-Grenville 1962b: 221). “He was described in this history as a Baduy, suggesting that he came from the northern Swahili coast, where, according to De Barros, the Baduys originated” (Horton 1996: 425 n. 45) (in fact, the Portuguese gave the name *baduy* – from the Arabic *badawiy* – to all the Bedouin populations of the Red Sea and of the African coast). Trifoliate arches have no parallel in Iran, “but relate to the polylobed arches and mihrabs of northern Africa and Spain”; these mihrabs thus combine influences from the Persian Gulf and the Red Sea (Horton 1996: 425). Horton notes: “the twelfth-century mosques at Kizimkazi and Kaole bear many similarities to the eleventh century mosque at Shanga” (2001: 459). H. T. Wright (1993: 669) states that the deep mihrabs, along with panelled and corded decoration in cut coral, “are not attested earlier than the late 12th or 13th century for example at Shanga”; this dating can probably be pushed back in time. Wright also gives the existence of a central row of columns as characteristic of some mosques from the twelfth century onward.

to the Shirazi (the Persian New Year Festival, *nawruz*, is still celebrated in Swahili communities).⁵⁶ Moreover, many Swahili navigational terms appear to be of Persian origin (as is the case for Arabic) (Ferrand 1924). These contributions are difficult to date, but some may go back to the period between the eighth and tenth centuries.

It may be that Africans chose to associate themselves with the prestigious Buyid capital by adopting features of the Buyid court (Horton and Middleton 2000: 56). The *Songshi* (official history of the Song, thirteenth century) mentions the chief of the Zengdan (= Zangistān),⁵⁷ who sent an embassy to China in 1071, with the title of *A-mei lo A-mei lan*, a transcript of the *Amīr-i-amīrān*, used by the Buyids (this Song chronicle also shows the importance of the Persians in China: note the use of the term “Zangistān”). The African ambassador would have traveled for 160 days to reach China, going through Suḥār (in Oman), Kulam-Malay (Malabar coast), and Palembang. A Zanj envoy is also mentioned in 1083 (see Hirth and Rockhill 1911: 127). The description of the Zengdan and its resources suggests the northeastern part of the East African coast.⁵⁸ The same ambassador returned in 1083.

As Horton and Middleton point out (2000: 56), the Muslims of the Swahili coast appear to have been involved in the politico-religious quarrels of the north and to have changed their religious affiliations frequently. These changes also corresponded to local political strategies. The Shirazi may have been the rivals of Sunni, Qarmatian, and Ibadi groups: this rivalry may explain their decision to associate themselves with the Buyids.

While Persian influences along the East African coast were real during the eleventh century, the Shirazi myth was largely (re)written either during the fifteenth century, or the early sixteenth century. “The key to understanding the traditions may lie . . . not in the historical period the traditions purport to be about, but in the period and conditions that gave rise to the traditions themselves.”⁵⁹ These traditions were forged in order to promote the legitimacy of rulers during a period of increasing competition (Fleisher 2004b: 96): this corresponds more fully to the fifteenth than to the eleventh century. And yet the excavations at Sharma, on the coast of Hadramawt, a fortified entrepôt built by the Persians in the late tenth century, do bolster the idea of a Buyid influence and contacts with East Africa: many items in ceramic belonging to the late

⁵⁶ In fact, Arab sailors used the dating in relation to the *nawruz* (Persian New Year), as Ibn Mājid’s works show during the fifteenth century (Jouannès 2001: 40).

⁵⁷ The genealogy of this chief covered 500 years, according to the *Songshi* (Hirth and Rockhill 1911: 127; Wheatley 1975: 104; Allen 1993: 137). The *Songshi* goes on to state that the capital of the Zengdan is 20 *li* from the sea coast. “The wealthy people wear turbans and clothes of flowered brocade,” or cotton clothes (Hirth and Rockhill 1911: 127).

⁵⁸ The offering of 2,000 silver *lieng* by the representatives of Zeng-dan indicates enrichment through trade, since East Africa had no silver mines. The *Song Annals* mention gold, silver, and copper coins used by the Zanj.

⁵⁹ Spear 2000: 289; Pouwels 1987: 10–21, 35ff. According to Pouwels, the formation of the Shirazi traditions was linked to the tensions and social changes caused by new Arabian arrivals from the thirteenth century onward. Horton and Middleton (2000: 59) signal that Kilwa came under strong Shiite influences during the fifteenth and early sixteenth centuries. “The author of the Arabic *History of Kilwa* was most probably a (Twelver) Shi’ite.” In the Shirazi tradition reported by De Barros, ‘Ali avoided stopping at Mogadishu and Barawa, where a strong Sunni Arab influence could be seen from the 13th century onward (Pouwels 1987: 36).

Tana tradition dated between the tenth and twelfth centuries have been unearthed at this site.⁶⁰ Sharma probably served as a base for Persian Gulf networks and for migrations toward East Africa.

Although the Shirazi had chosen to link themselves with Persia, the exchange networks in which they were involved maintained connections with other regions influenced by Shiism, such as Zaydi Yemen⁶¹ and the Fatimid world: eight Fatimid gold dinars (or copies) have been found in the Mtambwe treasure, along with 2,052 silver coins. A silver coin found at Manda had been struck in Sicily around the year 1000 CE (Sutton 1990: 67). According to J. de V. Allen and M. Horton, the Shirazi appear to have been Swahili who formed dominant aristocratic lineages, originating either along the Benadir coast⁶² or the Lamu archipelago (Horton and Middleton 2000: 59). Other researchers, such as R. Pouwels, however, have questioned the unity of the so-called Shirazi “dynasty” and the very idea of “a place of origin” (Pouwels 2003). Conversely, S. Pradines has defended the idea of direct influences exerted by Persian Gulf populations on Shirazi myths and culture (2009: 64). During the eleventh century, the Shirazi moved from the Kenyan coast further south (see above), spreading their Islamic culture to Pemba, Zanzibar, Mafia, Kilwa, and the Comoros. The settlements on these islands, “as well as the city-states of Ozi, Mombasa and Malindi, remained Shirazi until after the Portuguese conquest” (Trimingham 1964: 10). Shirazi traditions also refer to Shungwaya, the mythical cradle of the Swahili, a place purportedly located on the coast facing Pate Island.⁶³ In the same way, the Zafiraminia “Indonesians” who sailed southward along the East Malagasy coast claimed to have both Indian and Arab (from Mecca) origins (see below), and the islamized aristocrats of the Antemoro country claimed to have come from Mecca. The purported origins of all these groups, who developed highly syncretic cultures, are above all expressions of ideological references.

Horton associates the progress of Islam at Shanga with the Shirazi; it was marked by the building of a Friday mosque during the early eleventh century; however, between 1050 and 1075, this mosque was burned down, as were the coral buildings located in the

⁶⁰ Rougeulle 2003: 296. In addition, this author points out that sgraffiato ceramics of the same type as those found at Tiz (southeastern Persia) and Sharma have been found at Shanga, dated mainly to between 1000 and 1250.

⁶¹ According to Horton and Middleton (2000: 64), “the Shirazi may have been broadly Zaydite. [After leaving the Lamu archipelago, they] decided to adopt a stronger Shi’ite identity, linked to the Persian side of the Gulf.” Various authors are reticent with regard to the suggestions Horton and Middleton make concerning the presence of Zaydis, Qarmatians, and Ibadis on the coast; see for example Insoll (2003: 179).

⁶² N. Chittick has considered the Shirazi as the children of mixed marriages between Arabs or Persians and natives from the Benadir coast. J. de V. Allen (1993: 193) has argued that people from East Africa, returning from Persia, had an increasing influence on the Swahili coast.

⁶³ Allen 1993: 114ff. The *Kilwa Chronicle* also mentions the settlement of Zaydis from Yemen at Shangaya [Shungwaya] during the ninth century. J. Willis (1993) places the elaboration of the Shungwaya myth among the Mijikenda (Kenyan coast) at a recent time, during the early twentieth century. As T. Vernet points out, based on Pouwels’s work, “traditions concerning Shungwaya were aimed at creating a narrative of the interactions” between Swahili and the communities of the coastal hinterland “in order to connect the Swahili to the African continent, by mirroring Shirazi legends associated with the Arabo-Islamic world and inflows from the Indian Ocean” (Vernet 2005: 231). Portuguese maps and archives place a site they call variously Jaigaia, Iungaya, Chungaya, or Xiugaya, in the Bur Gao region (Vernet 2005: 233–234).

town's center. This event may have been due to the arrival of Qarmatians, mentioned in the *Kilwa Chronicle* as coming from Laḥah (al-Ḥasā and Bahrain), in the Persian Gulf (Horton 1996: 426). According to this chronicle, the Qarmatians may have colonized the Benadir coast, founding Mogadishu, Barawa, Marka, and city-states located in the Lamu archipelago and on Zanzibar, during the mid- or late eleventh century.⁶⁴ In revolt against the caliphate, the Qarmatians were expelled from Arabia in 1077. Their egalitarian ideals may have influenced the organization of the city-states along the northern Swahili coast, which were ruled by elders elected from various noble lineages (according to a system that both Allen and Horton have called *waungwana*, from a term referring to “nobles” in the coastal cities) (Allen has used the term “collective patriciate” for the “Arab-*wangwana* mode of dominance”; Nurse and Spear [1985: 85] have used the expression “oligarchic republics”).⁶⁵ In any event, what we see here is “an increasingly wealthy class of merchants who, by restricting access to wealth, were able to monopolize political power” (Insoll 2003: 174). Yāqūt writes that, at the beginning of the thirteenth century, Mogadishu “has no king, but their affairs are regulated by elders.” In 1504, Ravesco describes the city of Barawa as “governed by a corporation, . . . twelve moors being the principal heads of the government” (Horton 1996: 426).⁶⁶ The chiefs were chosen according to a system of rotating power among kinship groups.⁶⁷ Allen states that this *waungwana* organization developed in

⁶⁴ According to the *Kilwa Chronicle*, these Qarmatians arrived aboard three ships, captained by seven brothers (Freeman-Grenville 1975: 83–84). The *Chronicle* credits them with founding the city of Mogadishu, despite Idrisi's claim that this city is pagan. It is likely that Mogadishu already existed during the eighth or ninth century (see above, however, for a different opinion by M. Horton). The village of Sarapion mentioned by the *Periplus of the Erythraean Sea* was located in the region of Mogadishu.

⁶⁵ The term *uungwana* reflects the idea of “civilization, urbanity.” Changes can be seen at Manda at the same time as at Shanga. The *waungwana* order expresses a sharp distinction between patricians and non-patricians. See Allen 1993: 203; Horton 1996: 426; Middleton 1992: 90. Pouwels argues that the *waungwana* system developed and spread between the sixteenth and nineteenth centuries from Pate and Lamu. For a description of the social system at Lamu (which may reflect the older system, according to Horton), see Middleton 1992: 91ff. “The system of the patricians of Lamu, writes Middleton, is similar, to some extent, to that found in southern Arabia.” Beyond a collective character, social analysis on Lamu shows the complexity of an organization which is in fact rather hierarchized, with twelve subclans distributed among five ranks: moreover, the lineages of each subclan are distributed among two “demes” (swahili *mkaō*, plural *mikaō*) which exert power alternately. The representatives of the nine first subclans were present in the city council. It is obviously risky to apply recent observations to more ancient times. One may imagine, however, that such observations may highlight operating principles of the past. As can be seen in the Antemoro group of southeastern Madagascar, there was valorization of the principle of (theoretical) primogeniture of clans, endogamy (although intermarriage with Sharifian lineages was a source of power), and wealth, which made it possible to make alliances and acquire slaves (on the importance of wealth, see Vernet 2005: 407ff.). The term *ungwana* may be related to *mbwana*, “lord, master, gentleman,” with a *b/ng* alternation. For G. Philippon (p.c.), however, “the name *-(l)ungwana* can be split into *-(l)ungu* (‘god’ as in the Swahili Mungu or Giryama Mulungu ‘God’), and a diminutive suffix *-ana* (vestigial in Swahili). *Ungwana*, ‘free man,’ would thus mean ‘little god’ – which remains questionable semantically. However, the alternation *(m)bw/(n)gw* does exist in some Bantu languages, including some Swahili dialects.”

⁶⁶ Freeman-Grenville 1975: 78–79. These twelve rulers were presented as the descendants of the “seven brothers” from the Persian Gulf. Indeed, the Qarmatians are “seveners.”

⁶⁷ We also find this rotating system in some aristocratic Antemoro villages in southeastern Madagascar, but it did not apply to the king's lineage (Rolland 1974; Beaujard 1992).

opposition to the Shirazi royal system; data available to us largely belong to the modern period, however, and especially to the nineteenth century: such historical reconstruction should therefore be viewed with caution.

From 1150 onward, the rulers of Kilwa, who stopped striking coins, may have been Ibadis. A document from Oman dated to 1116 written by an Ibadi religious leader is addressed to ‘Alī bin ‘Alī and Ḥasan bin ‘Alī; these appear to have been the leaders of an Ibadi faction at Kilwa. Another Omani document, dated to c. 1200, describes what appears to be an imaginary conversation between an Ibadi missionary – sent by Oman to help the Ibadis of Kilwa – and the leader of a rival faction identified as a group of Twelver Shiites from Persia (Wilkinson 1981; Horton 2001: 463). Aside from religious disputes, the documents describe what was probably a power struggle between rival aristocratic groups relying upon different networks, at Kilwa, or at Kilwa and Sanje ya Kati, a city built on a neighboring island.⁶⁸ The mosque at Sanje ya Kati (dated to the twelfth century) has a floorplan and mihrab recalling the Ibadi mosque of Ras Mkumbuu.⁶⁹ Between 1200 and 1230, Kilwa may have had Shiite rulers who undertook the building of the northern part of the Great Mosque; the city would later have returned to Ibadi rituals around 1230. In 1224, Yāqūt writes that “the rulers of Pemba are Shiites from Kufa” (Pradines 2003: 357) (however, Yāqūt was largely a compiler, which makes it difficult to know to which period his data on Kilwa refer). According to Allen, “at the beginning of the twelfth century, there were Ibadi Muslims at Kilwa, and also perhaps at Mafia, Zanzibar, and Pemba.”⁷⁰ The building of a side aisle – with its own mihrab, of the Ibadi type, dated to the early thirteenth century – in a mosque on Tumbatu Island is consistent with the *Kilwa Chronicle*. This tradition mentions the exile of the ruler of Kilwa to Zanzibar at that time (Horton and Middleton 2000: 67; Horton 2001: 463).

New Ibadi influences (see below) along with those from the Arab Sunni world would have an impact on the development of the *waungwana* system during the fourteenth and fifteenth centuries.⁷¹ It is likely that the cities of Shanga and Manda never fully adopted the “collective patriciate” mode. Horton points to the existence of a *siwa* horn and drums at Manda,⁷² as well as to the style of the mihrab in the mosques. The former Shirazi system survived further south. It was characterized by the use of regalia⁷³ and strong social hierarchization, with titles and dress codes designed to differentiate

⁶⁸ Founded around the end of the tenth century, Sanje ya Kati was probably the rival city called “Shagh” by the *Kilwa Chronicle* in an anonymous manuscript at the British Museum (nineteenth century) (Pradines 2006, 2009). De Barros gives the name as “Xanga”.

⁶⁹ Another mosque existed prior to the Ibadi building; see Pradines 2009: 65.

⁷⁰ Wilkinson 1981; Allen 1993: 181–182. See also Horton and Middleton 2000: 57, 66–67.

⁷¹ This system has only been described in the nineteenth and twentieth centuries; see above.

⁷² *Siwa* horns and drums made up the royal regalia, along the entire coast and also in Madagascar, alongside seats of power “made of ebony inlaid with silver,” spears and other objects (Middleton 1992: 44).

⁷³ Ranking within Shirazi cities is probably in need of qualification. In Kilwa, during the seventeenth century, the power of the *waziri*, serving non-Shirazi clans and newly arrived groups, acted as a counterweight to the power of the sultan; this can also be seen at Siyu, during the seventeenth and eighteenth centuries (Allen 1993: 224; Vernet 2005: 404, 409, 564). The same applied to Mayotte, where traditions relating to the enthronement of rulers show the major role played by a *waziri* chief of a clan described as “black” and “indigenous” (Blanchy 1997: 115–116). In Madagascar’s Anosy region during the seventeenth century, the *voaziry* were chiefs of “black” “pagan” groups enjoying some prerogatives over

various ranks within the nobility.⁷⁴ J. de V. Allen saw a Buyid Persian influence on this social construction (some titles were of Persian or Arabic origin, while others were Bantu).⁷⁵ In general, “mastery of the codes and external signs of urbanity were crucial to Swahili identity and social stratification” (Vernet 2004: 386). We appear to need a more detailed understanding of the connections linking trade growth, the spread of Islam, and the development of strongly hierarchized societies; this can be done by taking the dynamics and traditions of African societies into account. The opposition emphasized by Allen and other authors between cities with “collective patriciates” and cities ruled by kings should certainly be qualified; the model seems to be too static and is generally based on recent observations. Various intermediate configurations may have been present, with kings controlled by councils of elders. We must also keep in mind the fluidity of these organizational systems, which were subject to various influences that could explain changes in modes of governance; these systems were certainly able to adapt to evolving sociopolitical conditions. Aristocratic lineages were hierarchized according to criteria such as ancestrality, wealth, size, and moral reputation, and their manifold levels often reflected complementary functions.

In fact, the divergence between the *waungwana* and Shirazi systems reflects a universal dichotomy in leadership strategies: a polarity in the structure of complex societies. The first system places greater emphasis on group interests; “intra-group differentiation [here, is] minimal” and “social integration is reinforced through communal rituals.” The second system “emphasizes the identification of elites by special housing and burial structures, and by status-defining items of wealth, especially prestigious objects obtained through long-distance exchange.”⁷⁶

Islam was well established from the thirteenth century onward and played an integrative role along the Swahili coast. Prior to this period, there had been divergence between archaeological and the textual data. According to Arabic sources, the spread of Islam was still rather limited during the twelfth century. Idrīsī writes that only the northern coast of Barābara (Berbera) had converted to Islam. The Zanj, further south, were pagans, with the exception of the people of Ungūja (Zanzibar). During the thirteenth century, Yāqūt and Ibn Saʿīd state that only Mogadishu, Zanzibar, Pemba, and Kilwa were Muslim. The oldest mosques along the coast usually date to the eleventh and twelfth centuries (besides the mosques of the Lamu archipelago, Pemba, and Zanzibar, we note those found at Kaole, Kisimani Mafia, Sanje ya Kati, as well as Domoni and Sima, in the Comoros Islands).⁷⁷ Some mosques have been

“white” islamized *roandriana* (see below). It is possible that similar systems of counter-power were in place in Swahili cities at early times.

⁷⁴ “Each rank had certain sumptuary, ritual and economic privileges associated with it” (Sinclair and Hakansson 2000: 469). Access to ranks was achieved through the giving of great feasts which allowed for some redistribution of wealth within the community (Horton and Middleton 2000: 168).

⁷⁵ Allen 1993: 186. Among Arabo-Persian titles, one finds *diwani*, *waziri*, *sheha*, *amiri*, *tajiri*, and *makata*. Ibn Battūta mentions wazirs and emirs as “council members” in Mogadishu; the city was ruled by a sheikh (1982, 11: 90). These titles may refer to different functions, depending on location and time period.

⁷⁶ Blanton *et al.* 1996: 4–6; for Neolithic China, see Liu 2004: 249–250.

⁷⁷ Horton 2001: 455. J. Middleton (1992: 39) writes of an “overall acceptionation” of Islam during the eleventh century. Islam also progressed in the Horn of Africa during the twelfth and thirteenth centuries, where the various nomad populations (Afars and Somalis) were Muslim.

unearthed that date to earlier times, however, as previously noted. It is also likely that mosques built using plant materials – which are difficult to detect in archaeological excavations – were present at certain other, older sites.⁷⁸ Repairs and additions to the mosques at Shanga and Kilwa speak eloquently of the spread of Islam (Pouwels 2000: 252). At Mogadishu, a minaret is dated to 1238, and the mihrab of the Fakhr ad-Dīn mosque bears a date corresponding to the year 1269 (Matveiev 1985: 511). During the twelfth and thirteenth centuries, cemeteries show Islamic burial rituals at Shanga, Kilwa, Domoni (Anjouan), Hanyundro, and Bagamoyo (Mayotte) (Wright 1993: 669). Islam was certainly flourishing along the East African coast during the thirteenth century; the same period of expansion holds for Southeast Asia. According to Ibn Battūta, in 1331, most of coastal population was Muslim. It was probably during the thirteenth century that the use of the term “Swahili” became commonplace.

The diversity and fluidity of the religious affiliations accompanying political strategies and power struggles has already been pointed out, after Horton and Middleton. Sunnis, Shiites, and Khārijites-Ibadis were present. According to Ibn al-Mujāwir (c. 1232), Kilwa was Khārijite (slightly before 1208) after following the Shāfiʿi rite. In the account of his pseudo-journey along the Swahili coast, Ibn Battūta gives Kilwa as “Shāfiʿi.” This Sunni islamization – not only of Kilwa but of the entire coast – corresponds to the links established with South Arabia and the settlement of lineages of sharifs claiming genealogical connections to the Prophet. The Sharifi movement developed in Yemen during the eleventh century and reached East Africa at the time when trade expanded. The sharifs would later become religious scholars on the East African coast, and contribute to the spread of Sunni Islam.⁷⁹ Around the middle of the twelfth century, a family of the Qahtānī al-Wāʾil clan from Yemen settled at Mogadishu, and was later superseded by the Fakhr ad-Dīn group around 1250.⁸⁰

In Egypt’s orbit, Yemen grew in significance from 1235, when the Rasūlids established an independent state.⁸¹ During the second half of the thirteenth century, Mahdalī from Yemen, who claimed to have sharif ancestors, settled at Barawa, Lamu, Pate, Mombasa, Tumbatu (Zanzibar), and Kilwa. The first Mahdalī at Kilwa appears to have been Ḥasan ibn Tālūt (c. 1277–1294), who founded a new dynasty, issued coins and began building a large mosque, with multiple domes. The settlement of this dynasty at Kilwa probably aimed at controlling the gold trade from the Sofala coast

⁷⁸ At Kilwa, for example, the great mosque (dating to the beginning of the thirteenth century) may have been preceded by a more modest building. As noted above, Horton has discovered seven small mosques which were built using plant materials at Shanga and dated to the eighth and ninth centuries. C. Chanudet (2001: 194) has put forward the idea of an older process of islamization in the Swahili world, within a spatial and temporal continuum.

⁷⁹ While northern Yemen remained Zaydi, southern Yemen and the Hadramawt region became Sunni of the Shāfiʿi branch from 1173 onward (Pouwels 2002: 401).

⁸⁰ Horton and Middleton 2000: 69; Horton 2001: 463–466. Ibn al-Mujāwir mentions the arrival of Banū Majid at Mogadishu from Yemen in 1159. According to Trimmingham, this arrival marked the beginning of Mogadishu’s preeminence, but the two facts may be simply concomitant. Banū Hatim also arrived from northern Yemen on the northern Swahili coast during the twelfth century, where they would prove influential. They were later known as Khatimi (Pouwels 2002: 401–402).

⁸¹ We have no indication, however, of a deliberate policy by the Rasūlid sultans to expand Yemeni networks in East Africa (Vallet 2010b: 560–561). Few Yemeni scholars appear to have sojourned on the East African coast.

(Sutton 1998). Kilwa's new preeminence coincided with the demise of its rival city Sanjé ya Kati (Pradines 2006), marked by an archaeological layer of ashes. The final phase of this city yielded abundant amounts of hatched sgraffiato ware from the Persian Gulf as well as Chinese ceramics such as "Martaban" jars, celadons, and *qingbai* porcelain (Pradines 2009: 61). The precise origin of the Mahdali is uncertain; curiously, the name of this family is not found in the Rasūlid sources, and Kilwa sent no embassies to Yemen prior to the late fourteenth century (Vallet 2010b: 560).⁸² Nevertheless, black-on-yellow ceramics characteristic of Yemen did appear on the East African coast from 1250 onward (a few shards have been found in a house unearthed at Sanje ya Kati, in the layer corresponding to the abandonment of this site) (Pradines 2009).⁸³ Moreover, sgraffiato ware from the Persian Gulf remained present until the fourteenth century. In addition, inscriptions at Mogadishu dated to the thirteenth century refer to Persians; one of them built a mosque (Trimingham 1964: 10).

The significance of Egypt and the Red Sea from the tenth century onward, paralleling that of the Persian Gulf, has been pointed out. Products from East Africa were exported mostly to Aden and Qays. Via Aden, the Persian Gulf or directly from India, various products from eastern Asia, such as silk and ceramics, arrived on the African coast. Among the ceramics, excavations have yielded "Martaban" jars (this type of pottery was in fact manufactured in Guangdong, and replaced Dusun pottery from the eleventh century onward;⁸⁴ it is dated to the thirteenth century at Shanga); Longquan celadon from southern Zhejiang (dated to the late thirteenth century at Shanga); white or blue-greenish *qingbai* ceramics (twelfth-thirteenth century at Shanga); and cream-glazed pottery, termed "Marco-Polo" pottery (dated to between the twelfth and fifteenth centuries at Shanga).

In addition to Arabo-Persians, Indians came to trade, and settled along the African coast. This was by no means a new development, as Indians had been present on the African coast for centuries, and their contribution to the formation of the Swahili culture from the tenth century onward should certainly be reevaluated. Around 1030, al-Bīrūnī sheds light on the significance of Sōmanāt (Gujarat) as a port of transit between Africa and the Orient (see above). Idrīsī (twelfth century) mentions the presence of Indians at Ṣiyūna [or Ṣayūna], at the mouth of the Zambezi: "Its population is made up of communities from India, of black Zeng, and others. It is located

⁸² B. G. Martin (1974) has suggested a connection between the Mahdali and "the *nisba* al-Mahādila, a family of sharifs who lived in the Wādī Surdud"; however, this hypothesis has not been confirmed (Vallet 2010b: 560 n. 95).

⁸³ While black-on-yellow ceramic represents 46 percent of the imports at Mduuni (on the northwestern coast of Pemba), it is rare on the other sites: some sites thus had privileged relations with Yemen, either directly or indirectly (Fleisher 2004a: 270). Fleisher emphasizes that diversity in ceramics increased during the thirteenth century on Pemba, revealing a broadening of trade relationships in the Indian Ocean (2004a: 275).

⁸⁴ These green- or brown-glazed jars were produced in various regions of Southeast Asia, during the fourteenth and fifteenth centuries especially. Their name, Martaban, comes from the port of Burma where goods were transshipped. They were used for handling liquids. In Champa, Ibn Battūta received four "*marthabān*, or large porcelain vases, filled with ginger, pepper, citrus fruit and mangoes; all were salted, the kind of things that are prepared for sea travels" (Ibn Battūta 1982, 111: 312).

along the coast and the chief of the country lives there . . . The settlement is built in an estuary; the ships which go there sail up [the river].”⁸⁵ In 1240, Ibn al-Wardī writes this about the Sofala coast: “The Indians visit this region and buy iron for large sums of silver, although they have iron mines in India, but the mines in the Sofala country are of better quality, [the ore being] purer and softer. The Indians make it purer and it becomes lumps of steel.”⁸⁶ As already pointed out, Killick (2009) and Robertshaw (2009) have reservations regarding this tradition – going back to Idrīsī – of iron being exported to India. Pradines notes that “Shirazi architecture shows stylistic affinities with the tombs and mihrabs of northwestern India, where several Ismaili merchant communities were settled” (2003: 357), and the fortress of Husuni Ndogo, at Kilwa (possibly dated to the thirteenth century) shows influences from Deccan. As mentioned, the Chinese chronicler Zhao Rugua wrote in 1240 that each year, the ports of Gujarat and Arabia sent ships to Zanzibar, loaded with items such as cotton fabrics, copper, and porcelain. A type of purple Indian ceramic has been unearthed at Manda, as well as beads.⁸⁷ From the eleventh century onward, Indian red ware, well known from 1050 to 1300, also arrived in East Africa (Horton 1996: 418). The introduction of a weaving industry at Shanga around the eleventh century may have resulted from contacts with Indian technology.⁸⁸ On Pemba, the site of Mtambwe Mkuu has yielded a fragment of Indian blue cotton cloth (Horton 2004: 73). As mentioned above, Horton also sees an Indian influence at Shanga during the tenth–eleventh century in bead drilling and metallurgy, based on a lion figurine found at this site. An Indian influence can also be observed on Zanzibar and Pemba, where Indian and Chinese coins have been discovered, and where white Chinese ceramic ware is more abundant than at Shanga. During the fourteenth century, however, “there is much more Indian pottery on Tumbatu than on other sites” (Horton and Middleton 2000: 223 n. 24). According to Horton (2004), “the site of Mkokotoni on Zanzibar seems to have been a center for either the import or manufacture of glass beads during the thirteenth and fourteenth centuries . . . The molten glass found along with the beads may indicate that they were ‘finished’ on the African coast.” South Asians were probably involved in this process (Wood, p.c.). Besides Gujarat, two Indian states which were major powers of the world-system, the Chola thalassocracy (ninth through thirteenth century)⁸⁹ and the Delhi sultanate (thirteenth and fourteenth centuries), directly or indirectly fostered growing exchanges in the Indian Ocean. The ports along the Malabar coast were also active. Some of the Indian influences in East Africa probably arrived with Arabs or

⁸⁵ Viré 1984: 26–27. Al-Bīrūnī had already mentioned Sayūna. While R. Summers (1969) has suggested Indian influences in gold recovery techniques in Zimbabwe, few researchers support this theory. This town of Şiyūna or Şayūna may be Sena, an ancient Swahili merchant outpost mentioned by Portuguese authors (Allibert 1990: 101, and Poumailloux 2002: 360). Ibn Saʿīd gives Şayūna as the capital of a region in Sofala.

⁸⁶ *Kharīdat al-ʿajāʾib*, Beirut, Dār al-sharq al-ʿarabī, s.d., p. 72. I thank J.-C. Ducène for this translation and for his indication of the reference.

⁸⁷ The Lamu archipelago later fell into relative decline. During the eleventh and twelfth centuries, however, 10 percent of the assemblage discovered at Manda had been imported (Chittick 1984).

⁸⁸ Horton 1996: 418. W. H. Brown (1985) describes the development of textile crafts at Siyu during the ninth century (quoted by Pearson 1998: 123).

⁸⁹ The Chola presence in the western Indian Ocean has still not been correctly evaluated.

Persians who had settled in India. They cannot be excluded from the architecture of the great mosque at Kilwa (Pradines 2003: 360). Ibn Saʿīd (who died in 1286) wrote that “the inhabitants of Kilwa are brothers of those from India and Sind.”⁹⁰

In a glossary collected by Father João dos Santos (1619) in Mozambique, one notes several terms of Konkani origin, for example *urraca*, from Konkani *urak*, an alcohol obtained by distilling palm or coconut wine, *sura*. The latter term, also known in Makwa, is related to Konkani *sur*. While Indian merchants may have introduced these terms, they may also conceivably have arrived through the intermediary of the Portuguese during the sixteenth century. In the field of coinage, also, Dos Santos gives the term *tanga*, a weight of gold corresponding to sixty reals, from the Indian term *tanka*, silver currency (Poumailloux 2002: 315). In contrast, *matal*, which represented 425 g of gold, derives from the Arabic *mitqāl*, “weight.”

Al-Bīrūnī knew of the merging of the Indian and Atlantic oceans off the Cape of Good Hope: “The sea of the Berbers stretches from Aden to Sufala of the Zanj, beyond which no ship ventures because of the great risks involved. Beyond this region, [the Indian Ocean] reaches the western sea [the Atlantic]” (Trimingham 1975: 273). As pointed out above, the writer of the *Periplus of the Erythraean Sea* was already aware that these oceans joined south of the African coast. Conversely, geographers such as Idrīsī followed the Ptolemaic tradition, which described the Indian Ocean as closed in the south by an unknown land.

Besides Gujaratis, South Indians probably helped disseminate Indian beads and cowries from the Maldives, and, especially from the thirteenth century onward, brought some of the Chinese ceramics that have been unearthed in Africa and Madagascar. C. Radimilahy has pointed out that at Mahilaka Chinese ceramic ware was imported in greater quantities during the thirteenth and fourteenth centuries. Horton has noted the same phenomenon at Shanga for the same period.⁹¹

The Chinese themselves, who were present in Sri Lanka and on the Indian coasts, may have sailed to the East African coast, as described in Chinese texts and maps (see above). China’s involvement in Indian Ocean trade increased during the twelfth and thirteenth centuries; at this time, the empire of the Southern Song, the main driver behind global growth in the world-system, was promoting maritime trade. Chinese coins have been discovered in various localities along the East African coast. In 1945, a cache near Makunduchi (Zanzibar) yielded 250 copper coins dated to the Tang and Song periods. Coins from the Song and the Ming periods have been found at and near Mogadishu under unclear circumstances, along with coins from Sri Lanka dated to the twelfth and thirteenth centuries (Filesi 1972: 42). Coins found at Mafia and Kilwa also

⁹⁰ Ferrand 1913: 321ff. For Pouwels (2002: 400), “the growing significance of a southerly, direct route from India to the East African coast through the Maldives Islands largely accounts for the increased importance of the southern coastal network under Kilwan hegemony, including Pemba, Zanzibar, Mafia, Sofala, the Comoro Islands, and Madagascar in the thirteenth and fourteenth centuries.” However, this route’s significance had already been highlighted much earlier by al-Bīrūnī.

⁹¹ According to Horton and Middleton (2000: 81), however, Indian and Chinese ceramics arrived mainly via ports of the Persian Gulf, such as Qays and Hormuz. Most of the trade to Shanga still came from the Persian Gulf. Horton (1996: 418) notes, however, that Indians had also settled in the Persian Gulf: Indian merchants thus lived at Qays in 1170. Aden is also a possible source for Chinese goods found in East Africa.

belong to the Tang and Song dynasties (Tang coins were still in use during the Song period).⁹² Yet these discoveries fail to provide convincing evidence for a Chinese presence on the East African coast.

Products from Africa, including men, traveled to India, and further east, toward the Malay world, Java, and China: in the case of men, as slaves or merchants. A Habashī (“Abyssinian”) is mentioned as the founder of a mosque at Lahore, the Indian capital of the Ghaznavids, in the twelfth century (Digby 1982c: 149, after Fakhr-i Mudabbir). In Delhi, the promotion of a Habashī slave infuriated the Turkish-slave aristocracy under the sultan Razziya (1236–1240). An African presence in India is more noticeable during the fourteenth and fifteenth centuries.

Curiously, Idrīsī has denied that the Swahili had an ability for sea travel:

The Zanj have no ships in which they can travel, but boats land in their country from Oman as do others that are going to Zabaj [probably the Comoros, in this passage]. These foreigners sell their goods there, and buy the produce of the country. (eighth section, p. 61, Viré 1984: 20)

And yet, for centuries, Swahili merchants had sailed to the Comoros, Madagascar, and, to a lesser extent, to the northern Indian Ocean. It is true, however, that few Swahili ships may have ventured to the other side of the ocean (Pearson 2000: 53). Control over the trade routes by the cores of the system (or by semi-peripheries in close contact with these cores) was a crucial element in the process of domination of the peripheries.

Competition among the various cores of the western Indian Ocean from the eleventh century onward may have – to some extent – benefited the Swahili semi-periphery, which was able to play off rivalries among Persians, Indians, Egyptians, and Yemenis (Horton and Middleton 2000: 80). This new situation may partly explain the growing prosperity of the Swahili coast at this time. Such prosperity, however, was primarily a regional trend within the world-system’s global movement, in which the East African coast remained under domination.

The Fourteenth Century: Kilwa’s Zenith and Decline, and the Flowering of Great Zimbabwe

The early fourteenth century was a period of prosperity for the Swahili coast; it coincided with the peak growth of the world-system during its third phase (tenth–fourteenth centuries). During the fourteenth and fifteenth centuries, sites of various sizes proliferated, having distinct functions within vast political and commercial networks, including inland regions. Wilson (1982), followed by Stiles (1992) and Kusimba (1999), has suggested a classification for these sites into five hierarchized and complementary levels, from hamlets to cities; Islam was now present in settlements of all sizes.⁹³ The development of Swahili society was founded, not only upon the rise to prominence of cities trading with foreign

⁹² A coin from the Chinese emperor Shan Tsung (1068–1086) and coins from Shauking (1131–1163) have been discovered on Mafia in 1916 (Ingrams 1967: 89). Chinese coins have also been retrieved at Kajengwa: they can only have been buried after 1265 (Oliver and Mathew 1963, 1: 110 n. 2).

⁹³ Kusimba 1999: 122. According to R. L. Pouwels (2000: 253), along the Swahili coast, about thirty communities have at least one mosque, but this figure is probably an underestimation. The proliferation

lands, but also upon an integration of coastal and inland communities through the building of trade and military networks. Between the Swahili and the populations of the interior, groups composed of both allies and clients became organized as intermediaries.⁹⁴ Pearson (1998) thus describes a Swahili world including four circles: the first was centered on the stone city; the second comprised the umland of the city; the third was inhabited by allied groups acting as intermediaries, with the more distant fourth circle containing the inland “barbarians.” Moreover, the advance of the “stone cities” expressed competitive processes aimed at winning favors from foreign merchants, as well as attracting countryside dwellers and forming alliances with them.⁹⁵

Stone architecture developed, using sophisticated forms and patterns, and the modes of construction changed. “In the region of Kilwa, for example, masonry skills evolved during the xiith century: walls were built of coral carved into square blocks grouted with cement to form regular horizontal courses. During the xivth century, the Swahili builders stopped preparing coral blocks of standardized size, and built walls using irregular coral rubble with a course of mortar every 90 centimeters” (Blanchard).⁹⁶ Functioning as warehouses and trade centers, and also places of significant craft production,⁹⁷ the “stone cities” were characteristic of the Swahili culture. They developed in contrast to “rural settlements” (villages or towns), inhabited mostly by farmers, herders, and fishermen, and essentially built using plant materials, on which little research has focused until recently.⁹⁸ Within the stone city, houses were built of carved coral, and were inhabited by patricians; these houses were located within enclosed areas. There were often several mosques in the city, with at least one Friday mosque in the city center.⁹⁹ At Shanga, as many as 185 stone buildings have been found

of mosques all along the coast corresponds to “the emergence of a wealthy and influential commercial class” (Pouwels 2000: 257).

⁹⁴ See above. More recently, one finds the Oromo (opposite the Lamu archipelago); the Wanyika (called “Mijikenda” during the twentieth century), and the Kamba in the Mombasa region; the Zaramo, Zigua, and Nyamwezi inland from the Tanzanian coast; and the Makonde, the Yao, and the Makwa further south (along the Tanzania/Mozambique border, and in Mozambique). See Alpers 1975; Middleton 1992: 19; Pouwels 1991: 381–382; Kusimba 1999: 138, 142; Horton and Middleton 2000: 96–97; Vernet 2005: 366–369, 524–525.

⁹⁵ J. B. Fleisher (2004a: 410, 427) on Pemba and T. Vernet (2005) on the northern Swahili coast have both pointed out an intense competition between and within these cities, as well as the importance of wealth, a marker of social status which – via the gift of textiles – made possible the creation of needed alliances with groups of the continent: these groups ensured a supply of export goods and agricultural products; they also provided a labor force and military support.

⁹⁶ <http://swahili-tanzania.over-blog.com/article-songo-mnara-74900341.html>

⁹⁷ The inner social spaces of cities were divided into units called *mitaa* (singular *mtaa*); these quarters were linked to kinship groups and to some labor specializations (see above). These quarters had representatives on city councils (Allen 1993: 222).

⁹⁸ Middleton 1992: 54ff. See, however Fleisher and LaViolette 1999, Fleisher 2004a, 2010. On average, the continental territory for each city on the Lamu archipelago encompassed between three and six villages (Vernet 2004: 396–398). There were towns inhabited by non-patricians, as well as independent cities with almost no stone structures, except mosques and tombs (Horton and Middleton 2000: 126–129).

⁹⁹ Tombs of important people, which are often places of pilgrimage, are also anchor points modeling urban spaces in religious centers (Middleton 1992: 60–61). An example is the discovery at Chwaka (a stone city in northern Pemba) of a pillar tomb showing a recess for offerings and a carved *siwa* horn (Fleisher 2004a: 416).

dated to the fourteenth century. Migrants to the city (such as Arabs and Indians), as well as slaves and groups of freemen of lower status, such as fishermen, herders, and peasants, lived, not in stone houses, but in rammed earth houses built using plant materials, and located outside the city walls.¹⁰⁰ As T. Vernet notes, “Swahili identity and social hierarchy crystallized in the stone city, the core of the territory considered as an exclusive space, in contrast to an area located outside the urban wall, and seen as uncivilized. The city exerted its sovereignty over a rural hinterland . . . an inclusive area where continental non-Swahili groups were progressively acculturated and assimilated.”¹⁰¹ These two categories of settlements appear to have reciprocated economically: the “stone cities” contributed imported items or goods manufactured by their craftsmen, while the rural settlements provided food and products from the interior. It is clear that the situation was not fixed within the networks. J. Middleton thus notes that rural settlements were sometimes stone cities that had lost their mercantile function. In parallel to these two categories of settlements, a white/black distinction was established, linked to various oppositions: purity vs. impurity, believers vs. nonbelievers, patricians vs. non-patricians, and freemen vs. dependants (the white/black distinction was cultural and linguistic, not physical).¹⁰²

Most of Africa’s coastal population lived in rural villages. However, the existence of clientelistic networks and kinship connections linking patricians with rural populations leads us to qualify oppositions such as “urbanity vs. rurality” (*utamaduni/ushenzi*), and “civilization vs. barbarity”; these antagonisms were more ideal than practical. More recently, rural settlements enjoyed some autonomy, and their spokesmen were sometimes even allowed to participate in decisions made in the city-state.¹⁰³ The economic and political interdependence between the city-states and groups of the hinterland has already been pointed out.

¹⁰⁰ Mombasa, Pate, and Lamu, for example, may have been inhabited only by Swahili people. City walls were symbolic. Control over the territory was stricter in the cities with organizations of the *waungwana* type, but the dichotomy “stone city”/“town of the commoners” should be qualified (Fleisher 2010). In contrast, along the coast south of Mombasa, “local non-Swahili groups also lived in and near the towns and regarded themselves as their citizens” (Middleton 1992: 43, and 54, 60, 77). Only the elite was authorized to build in stone. Houses made of plant materials were built within the city walls (Horton and Middleton 2000: 120); cattle enclosures were also present in the cities. The Portuguese descriptions of places such as Mozambique and Sofala show that in some cities, only a few houses (primarily those of the kings) were built of stone (Vernet 2004: 399, quoting Barros). As Fleisher notes (2004a: 105 n. 9), the opposition “stone city”/“country town” is only fully valid for the northern Swahili coast; moreover, there is more than one type of “stone city.”

¹⁰¹ Vernet 2004: 381; Middleton 1992: 60. Vernet notes that “integration was an issue throughout the territory, including the walled city, which permanently assimilated new arrivals” (2004: 381). This analysis is based primarily on the example provided by cities on the Lamu archipelago during the seventeenth, eighteenth, and nineteenth centuries.

¹⁰² This distinction was mentioned by Arab travelers. See Middleton 1992: 38, 82. This split between “whites” and “blacks” has been described on Madagascar, in Anosy, during the seventeenth century, and in the Antemoro kingdom (southeast coast). S. Blanchy (1997: 115–116) describes this opposition through the traditions of origin of the first *beja* ruler in Mayotte. On the importance of the concept of purity in Swahili society, see Middleton 1992: 192ff.

¹⁰³ On these various points, see Vernet 2004: 400–402. Vernet gives the example of Pate during the seventeenth century and Kilwa during the eighteenth century.

Of the various Swahili cities, Mogadishu, in the north, and Kilwa, in the south, held dominant positions during the fourteenth century. Ibn Battūta claims to have visited the East African coast in 1331. While he certainly visited Mogadishu, the rest of his journey, toward Mombasa and Kilwa, appears to have been an invention, founded upon accounts heard in Aden or Mogadishu (Hirsch and Fauvelle-Aymar 2003). He describes Mogadishu as “a very large city,” that received visits from or was home to many Muslim jurists, and was renowned for the cloth manufactured by its craftsmen, which was “exported to Egypt and elsewhere” (note that a semi-periphery could also export manufactured goods to a core). The city’s qadi was of Egyptian origin. After Mogadishu, Ibn Battūta writes that he traveled “to the country of the Sawahil and the city of Couloua [Kilwa], in the country of the Zenj” (Ibn Battūta 1982, 11: 90). On his way, he purportedly stopped at Mombasa, before it grew to significance; he erroneously describes it as being located two days’ sail from the coast. According to him, Kilwa “is one of the most beautiful and well-built cities.” His description of wooden houses covered with reeds in the city of Kilwa does not match the archaeological evidence, and reveals that Ibn Battūta in fact never went to Kilwa. He relates that its inhabitants, “Zenj, for the most part,” are Muslims who “profess the doctrine of Šafi’y.” Ibn Battūta notes the incessant wars waged by the sultan of Kilwa against the infidels. The raids conducted by the sultan in the hinterland aimed at capturing slaves and accumulating loot, one fifth of which the sultan gave “to the poor and the traveler” (see Koran, VIII, 41).¹⁰⁴ As B. Hirsch and F.-X. Fauvelle-Aymar note (2003: 115), this account “repeats a common theme describing the border between the *dar al-Islam* and the *dar al-harb*.” Ibn Battūta was told by a merchant that gold from Sofala came from the interior of the country.¹⁰⁵ The wealth of the city and of its sultan, Ḥasan bin Sulaymān (c. 1320–1333), is probably a partial explanation for this ruler’s generosity, praised by Ibn Battūta, who mentions – among this sultan’s many “generous actions” – the gift of ten slaves to a fakīr from Yemen (1982, 11: 93–94). Hearing the extent to which his subjects praised his action, the sultan ordered that ten more slaves and two loads of ivory be given to the fakīr, “for most of their gifts consist of ivory” (1959, 11: 381). This episode appears to be an “edifying story” built *a posteriori* upon oral accounts from Kilwa. Ibn Battūta also praises the sultan’s veneration for “pious men,” some of whom came from foreign lands, such as Iraq or Hijāz.¹⁰⁶ It is obvious that the sultan, who “studied at Aden and made the *hajj* to Mecca,” wanted to give Kilwa a respectable position within the Sunni Muslim world (Insoll 2003: 186). It is likely that this image of hospitality, generosity, and piety depicted by Ibn Battūta was carefully built up by Ḥasan bin Sulaymān. Distributing gifts is part of the exercise of an efficient power, and many authors, like M. Mauss (1983 [1950]), have pointed out its importance in forming clientelistic networks and wielding power. “When this worthy and open-handed sultan died,”

¹⁰⁴ The sultan Ḥasan ibn Sulaymān was nicknamed Abu’l-Mawahib, “Father of all qualities.”

¹⁰⁵ “The distance between Sufāla and Yūfi, in the country of the Limīs, is a month’s journey. From Yūfi, gold dust is brought to Sufāla” (Ibn Battūta 1959, 11: 380). Here, Ibn Battūta shows confusion with regard to West Africa, Yūfi referring to the kingdom of Nupe: geographers were not familiar with the African interior, and placed west adjacent to east.

¹⁰⁶ Little is currently known about the pilgrimages made to Mecca by Swahili and, more generally, about the long-distance voyages made by East African merchants.

writes Ibn Battūta, “he was succeeded by his brother Dā’ūd, who was of the opposite line of conduct. When a petitioner came to him he would say to him ‘He who gave is dead, and left nothing behind to be given’” (1959, 11: 382). Besides the opposition between the two sultans, required by the nature of this account, we may have here a clue to the reversal in economic situation that occurred in the Indian Ocean under the reign of Dā’ūd (1332–1356). Significantly, Ibn Khaldun writes this about the Mali Empire: “in 1373 Māri Jāta II, the king of Māli, died. This ruler did not have a good reputation. He ruined the kingdom and dissipated its wealth, bringing the empire to the brink of collapse” (Fauvelle-Aymar 2013: 254). Ibn Battūta had written earlier, in 1352: “The sultan of Māli is the mansā Sulaymān . . . He is an avaricious ruler from whom one cannot expect to receive any large gift.”

The *Kilwa Chronicle* mentions the sultan Ḥasan bin Sulaymān as “lord of the commerce of Sofala and of the islands of Pemba, Mafia, Zanzibar and of a great part of the shore of the mainland” (Sutton 2001: 435). The empire of Kilwa was in fact primarily commercial, not military; however, an armed expedition was launched against Mafia and the sultan was able to “impose a complex system of taxation” (Fleisher 2004b: 102–103, 110). The city controlled the gold and ivory trade with Sofala and maintained relations with the interior (Ziwa country) ensuring the collection of products for export. Kilwa’s wealth went along with the emergence of the kingdom of Mapungubwe and later the flourishing of the “Great Zimbabwe” culture during the thirteenth and the fourteenth centuries, based not only on cattle rearing (see above), but also on gold exploitation.¹⁰⁷ Copper and tin were also traded.¹⁰⁸ As mentioned above, the use of copper ingots of the HIIH shape reached Zimbabwe during the thirteenth–fourteenth century, before the appearance of ingots of the HRX type, thus revealing trade with the north (also revealed by iron gongs). It is obvious that the elite “not only regulated the trade in exotic goods, but also were its main beneficiaries” (Pikirayi 2001: 139). Apart from many copper or gold items, the Great Zimbabwe site has yielded tens of thousands of Indian glass beads (and a single bead of Chinese origin); Syrian glass; ceramics from the Persian Gulf and Chinese celadons; all of these point to relations with the coast and the Indian Ocean trade. A coin issued by the sultan of Kilwa Ḥasan bin Sulaymān has been unearthed. Swahili probably traveled from the coastal cities to Zimbabwe (Pearson 1998: 89 [according to Barros], 99) (Insoll [2003: 368], however, has expressed some skepticism).¹⁰⁹ Ironwork was clearly significant in the acropolis of Great Zimbabwe.¹¹⁰ At its peak, this city may have

¹⁰⁷ The period of greatest prosperity for Great Zimbabwe can be dated to between 1250 and 1350 (Horton and Middleton 2000: 101).

¹⁰⁸ Zimbabwe, Bosutswe, and Thulamela have yielded bronze artifacts with a tin content reaching 15 percent (Miller 2003: 107).

¹⁰⁹ A mixture of various imported artifacts (a pot with script of Persian origin, a Chinese shard from the Song period) and local artifacts found in a Zimbabwe cache in 1903 may have been the “treasury” of a Swahili merchant. It contains gold beads and gold thread, iron tools, brass thread, cowries, thousands of glass beads, and a few domestic objects (Miller *et al.* 2000: 96). Insoll (2003: 368, 370) believes that this assemblage may have belonged to the king.

¹¹⁰ Three iron gongs, linked to the king, and 200 kg of iron thread have been excavated. These discoveries reveal the elite’s control over production (Mitchell 2002: 327). This phenomenon has been observed in other African kingdoms (see Ekholm 1972: 121, for the Kongo kingdom). Although the symbolic



Figure 12.3 Copper coins from Kilwa, found in 1944 in northern Australia (Wessel Islands). The obverse side of the first coin (on the left) features the name of the ruler al-Ḥasan ibn Sulaymān (1310–1333); the reverse of a second coin (on the right) – probably an Ali ibn al-Ḥasan coin – has a star in its center, and bears a rhymed formula, *yathiq bi-mawla al-mannan*, “Trust in the Master of Favors.” The reason for their presence in northern Australia remains mysterious. Power House Museum, Sydney, Australia

been home to 18,000 inhabitants (Beach 1994). Many sites with stone enclosures dating back to the fourteenth and fifteenth centuries have been discovered between the Zambezi and Limpopo Rivers (Ruanga and Chipadze are two of these sites) (Fagan 1985: 581, 590). Cloth, whether imported or locally produced, must certainly have played an important role in trade and social exchanges.

The wealth of the Kilwa elites was expressed by the development of remarkable stone architecture, reaching dimensions previously unknown in East Africa. Sultan al-Ḥasan bin Sulaymān, mentioned by Ibn Battūta, had two buildings constructed that have made Kilwa famous: one is the great mosque – the initial building dates back to his grandfather, Ḥasan ibn Tālūt – and the other is the palace of Husuni Kubwa, probably built under the supervision of an Arab architect (Insoll 2003: 184). This sultan was also the only one who struck gold dinars bearing “pious and bombastic titles.”¹¹¹ At the same time, the issuance of copper coins intensified (copper, like gold, probably came from Zimbabwe). The Great Mosque was an expansion of an older mosque built during the eleventh century, with domes and vaults, supported by octagonal monolithic pillars made of coral, and with a great dome in its southeast part.¹¹² Husuni Kubwa was home to the sultan and his family.

significance of gold is more limited, the site of Zimbabwe has yielded many gold artifacts; tombs of the elite also contained gold in the form of jewels, for example at Ingombe Ilede (fifteenth century?) and Thulamela (fourteenth–sixteenth centuries); moreover, sites of the Zimbabwe culture’s elite have yielded crucibles and tools for working gold (Walker 1991; Mitchell 2002: 324–325). The presence of steatite (a bowl and an “amulet”) is also of note, as well as that of two small bronze bells (Fauvelle-Aymar 2013: 279).

¹¹¹ Sutton 1998: 127, 2001: 427. Four gold dinars have been found at Tumbatu. They correspond to the standards of weight used in the Muslim world.

¹¹² See the map in Chittick 1974: 66bis, and Sutton 1998: 136.

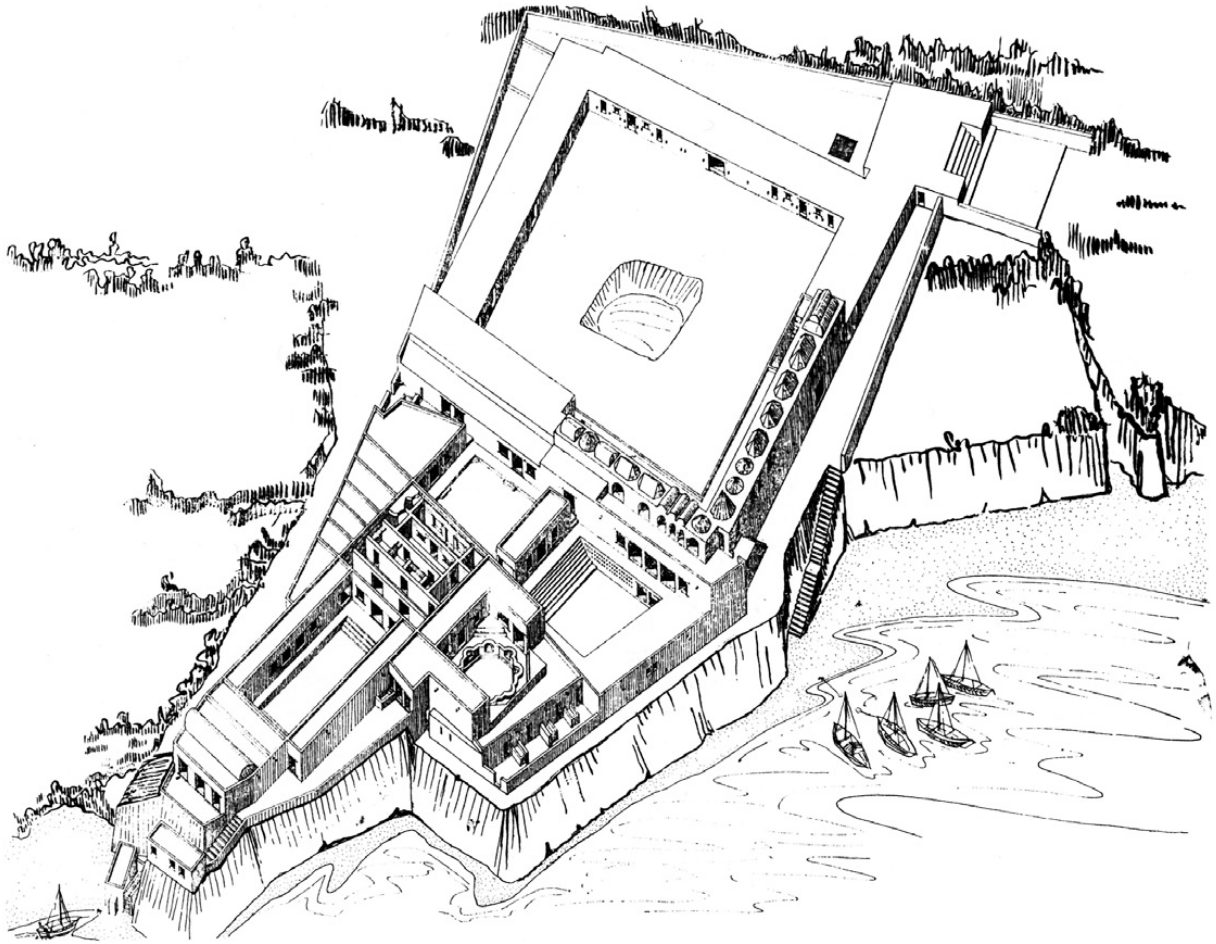


Figure 12.4 Drawing of the palace of Husuni Kubwa as it probably stood after its construction during the fourteenth century, Kilwa. See Sutton 2001, fig. 6.

It also contained two-story buildings devoted to commercial activities (its warehouses may have covered as much as half of its surface), within a walled enclosure. The palace had vaults of various shapes. The polygonal shape has been compared by Garlake to Persian architecture of the Seljuk period (eleventh–twelfth century). On the other hand, a decorative pond recalls ponds found in houses in Mamluk Egypt:¹¹³ the architects thus borrowed from various places and periods in the Muslim world. Carved coral was used to adorn doors and windows, showing a simple or double corded motif, common at various times. The building must have also had many carved wooden features. The huge scale of the buildings and the location of the palace some distance from the city may reflect social tensions within the sultanate, and increasing competition with coastal city-states, as Fleisher suggests (2004b: 111–112).

¹¹³ Garlake 1966: 114. Features of the palace such as the octagonal pool have also been compared with architectural designs from Sāmarrā (Abbasid period) (Sutton 2001: 430).

Mogadishu was probably the only city apart from Kilwa that struck coins during the fourteenth century (one issue is dated to 1322); however, finds are scarce. This implies a preeminence for Kilwa. The weight of the gold coins at Kilwa (4.20 g) is similar to that of Egyptian dinars: this weight was the standard for the Muslim world of the Indian Ocean. Kilwa in fact used a trimetallic system, gold, silver, and copper, at ratios of 1/10/1000, a system which fell within that of the Muslim world.¹¹⁴ These coins were probably used for trade, although their distribution appears to have been limited. A few copper coins, however, have been found abroad.¹¹⁵

At this time, Swahili ports had connections mostly with Yemen. The Rasūlid archives mention the arrival of ships from Mogadishu at Aden and al-Shiḥr, where the African city exported ebony, ambergris, ivory, copal, sesame oil, textiles, and slaves (Vallet 2010b: 558, according to the *Nūr al-ma'ārif* and the *Mulakḥkhaṣ al-ḥiṭān*). Moreover, the *Mulakḥkhaṣ al-ḥiṭān* (1412) mentions the arrival of rice aboard the ship captained by Husayn “from Kilwa” in 1336 (Vallet 2010b: 559). Kilwa imported black-on-yellow Yemeni ceramic ware from Aden, and toward the end of the fourteenth century, green-glazed monochrome ware. Egyptian glass vessels and glass beads from Egypt, India, and sometimes China were also imported (thirty-three red beads were found in the Husuni Kubwa palace, probably imported during the early fifteenth century) (Wood 2005). Finds of East African shards at Qusayr al-Qadim, and of Egyptian pottery in East Africa, attest to relations with the Red Sea. Ships from Gujarat, Calicut, and the Maldives also visited the East African coast. As already observed, part of the merchandise from Southeast Asia and China was probably carried by Indian ships sailing to Mogadishu, Mombasa, and Kilwa. Eastern ceramics are more numerous than are Islamic ceramics; celadons (Longquan), with small bowls decorated with engraved lotus petals, are the most common; porcelain of the blue-and-white type was still rare during the fourteenth century. Stoneware usually showing an incised motif under a green or brownish glaze was also imported from China. Moreover, one notes the appearance of Southeast Asian products; at first these were underglazed iron brown-painted stoneware from northern Vietnam kiln sites, dated to the thirteenth or early fourteenth century, excavated at Mombasa and Songo Mnara.¹¹⁶ From the 1370s onward, Vietnamese blue-and-white ware was also imported into East Africa. The importation of luxury products that were related to physical appearance and body care – such as Chinese bronze mirrors, kohl sticks, and beads – reveal transformations in the lifestyle of the elite everywhere along the East African coast; this transformation is also noticeable in the Comoros and Madagascar, where Swahili merchants came to trade. Moreover, N. Chittick has remarked upon the growing importance of bowls in ceramic assemblages, a clue to changes in manner of food

¹¹⁴ Horton and Middleton 2000: 93. This trimetallic system functioned from the ninth to the sixteenth century. Three gold coins were issued by the sultan Ḥasan ibn Sulaymān during the fourteenth century. Tiny silver coins have been retrieved along the East African coast, including along the Kenyan coast, which had previously been thought to be non-monetized (Horton and Middleton 2000).

¹¹⁵ The most distant discoveries have been made in northern Australia, within a small treasure that may have arrived there during the eighteenth century. This treasure also contains coins from Oman and Julfar (Horton and Middleton 2000: 93, 225 n. 23).

¹¹⁶ Sassoon 1980: 31; Zhao 2012: 56; 2015b.

consumption, something that Fleisher (2004a: 279) has noted on Pemba. Fleisher connects these changes to the establishment of a ranking system based upon one's ability to organize costly public feasts (2004a: 47ff.).

Excavations have revealed ceramics and beads; the chronicles also mention the significance of textiles and agricultural products in trade exchanges.¹¹⁷ Gifts of cloth, imported or locally produced, strengthened alliances between stone cities and their rural allies.¹¹⁸ Textiles were the most coveted products in trade with the continental interior: here and along the coast, they were the foundation upon which part of social status was built. Growing indigenous cotton, Kilwa developed textile production mostly destined for trade with the hinterland; while trade was conducted through barter, there were also gifts given in order to gain the goodwill of clientele communities. The city also manufactured beads. Ibn Battūta notes that while "the sultan imports silk, linen and cotton fabrics from Egypt, Jerusalem and India," the commoners dressed in locally made textiles (Fleisher 2004b).

As was the case along the entire coast, pottery production was significant and diverse at Kilwa during the fourteenth and fifteenth centuries. As mentioned above, Chittick found bowls with red slip and graphited decorations, an embellishment also observed in northern Mozambique (Lumbo, Ibo Island, ...) and as far as the mouth of the Save River. Wheel-thrown pottery was also found (Sinclair 1991).¹¹⁹

Among agricultural products, Abū Zayd (tenth century) noticed the valorization of dates and date syrup, both imported from the Persian Gulf. Ibn Battūta describes rice as the staple food at Mogadishu. This rice may have come from India, or from Madagascar; we know that the island would export rice during the ensuing century. Oils were also imported. Cities such as Kilwa needed to import most of what they consumed.

While Sofala gold and ivory were the main products exported from the African coast, a slave trade continued. The presence and role of East African slaves in southern Asia at this time have been noted above. "Abyssinian" Habashī men-at-arms (originating on the

¹¹⁷ The *Periplus of the Erythraean Sea*, besides iron weapons and glass, had already mentioned "a little wine and wheat offered at some places, not for trade, but to serve for getting the good-will of the savages" (Schoff 1974: 28-29).

¹¹⁸ For more recent periods, Vernet (2004: 252ff., 404) gives the example of gifts in the form of textiles from Malindi to the Segeju, or from Pate to the Oromo. These groups provided military assistance for these cities, and delivered food and export goods to them. For Mombasa, at the beginning of the seventeenth century, Boccardo notes that when members of Nyika groups (called "Mijikenda" in the twentieth century), who provided grain, visited the city, they each received a piece of cloth. In 1735, "the yearly tribute in textiles given by Mombasa to the Nyika reached a third of the customs revenues of Fort-Jesus [Mombasa]." In return, the Nyika brought grain after each harvest and provided troops (Vernet 2005: 262-263). See Middleton 1992: 42-43, on Mombasa and the Nyika/Mijikenda. M. Pearson (1998: 74) correctly points out that gifts in the form of textiles to client groups were also tributes paid to protect the cities from the military threat posed by these groups. See Duarte Barbosa's account of the tensions existing between Swahili towns and "allied groups" of the interior (Freeman-Grenville 1975: 132). Although Mombasa was often at war with groups from the continent, it was thanks to the relations established with its umland that the city "weathered a succession of catastrophic Portuguese attacks" at the beginning of the sixteenth century (Alpers 1975: 45).

¹¹⁹ According to N. Martin (2010), "the pottery of the Lumbo tradition, which can be found from Mozambique Island to the mouth of the Rovuma River," is comparable to the types of pottery at Kilwa belonging to Phases III and IV.

Horn of Africa?)¹²⁰ sailed aboard Indian vessels, for example on a ship – belonging to a Bohra merchant¹²¹ from Gandhar – in which Ibn Battūta traveled en route to southwestern India. “These [Abyssinian soldiers] are the lords of this sea, and when there is just one on board a ship the pirates and the Hindu idolaters refrain from attacking.”¹²² Ibn Battūta also mentions Habashī employed as men-at-arms on Chinese junks leaving the port of Calicut. At “Calenbou” (Colombo) (Sri Lanka), an export center for cinnamon, “the vizier-prince of the sea, Djālesty, keeps with him some five hundred Abyssinians” (Ibn Battūta 1982, III: 267). At the beginning of the fourteenth century, Amīr Khusraw (1253–1325), who lived in Delhi, was able to distinguish between Habashī and Zangī slaves, the latter hailing from Zanzibar and the adjacent East African littoral. Habashī were probably present in large numbers in Gujarat at this time; around 1375, the ruler of this province promised to remit “400 Hindu and Habashī slaves” annually to the Delhi sultan Fīrūz Shāh Tughlūq.¹²³ The sultan of Jaunpur, in northern India, who built up a dynasty at the end of this century, may have had a servile African origin.¹²⁴ During the fifteenth century, “African slaves became a prominent element in the military and administrative machines of the sultanates of the Deccan, Bengal, and Gujarat” (Digby 1982c: 150; see also Gaborieau 1995a: 462).

The semi-peripheral role played by the Swahili coast is reflected in an expansion of trade with the hinterland. Gold and ivory from Zimbabwe have been mentioned. Further north, sites in the African interior reveal the networks’ size. To the west of Lake Victoria, Ntusi contains glass beads and cowries (thirteenth–fourteenth century) and shows traces of ivory work (Insoll 2003: 377).¹²⁵ On the eastern shore of Lake Albert, a tomb at Kibiro (c. 1400), a site for salt production, has yielded 238 shell beads and 16 glass beads. Researchers estimate today that “the Indian Ocean trade may have been a factor in the development of the Lacustrine states” (Horton and Middleton 2000: 98). Moreover, pastoralism and agriculture developed from the eleventh century on in the Great Lakes region, both correlated with an increase in temperature and rainfall at the time (see Chrétien 2000: 88).

During the second half of the fourteenth century, a recession affecting the Indian Ocean trade had a significant impact on Kilwa: the city’s population appears to have

¹²⁰ The Indians called people of African origin “Habshī” or “Habashī”; usually these people came from the Horn of Africa; more generally, these terms were applied to all Africans.

¹²¹ The Bohra are Ismaili Indians.

¹²² Ibn Battūta, 1982, III: 186–187. S. Digby notes that this presence of Habashī on Indian ships or Chinese junks recalls the Axumites’ ancient domination of Indian Ocean trade. The importation of baobab trees, seen at Mandu and Bijāpur during the fifteenth and sixteenth centuries, may date from this period. “It has been argued that its importation reflects the survival of a non-Muslim cult among East Africans brought to India” (Digby 1982c: 149–150).

¹²³ Burton-Page 1971: 15; Digby 1982c: 149, quoting Sihrindī.

¹²⁴ Malik Sarwar, probably a Habshī eunuch, was appointed vizier in 1389 and later governor of eastern provinces for the empire. He was sent to Jaunpur, where his adoptive son, also of servile African origin, succeeded him as head of an independent sultanate (Burton-Page 1971). Wink argues, however, that the significance of the Mamluks decreased overall in India during the fourteenth and fifteenth centuries, with the exception of Bengal (1997: 181).

¹²⁵ Curiously, one sees little evidence of this coastal trade at the site of Bigo, located 15 kilometers from Ntusi; Bigo shows large, partly defensive earth structures (Kusimba and Kusimba 2005: 403).

declined. Issues of copper coins diminished under the reign of Da'ūd, Ḥasan bin Sulaymān's successor. Rulers at Kilwa no longer struck money after Sulaymān ibn al-Ḥusayn, who died around 1374. The Great Mosque collapsed during the fourteenth century (probably due to faulty construction), and would not be rebuilt until the following century. The palace of Husuni Kubwa was abandoned before completion. While it is possible that the plague which swept throughout the Indian Ocean during the 1340s struck Kilwa, the city's decline appears to have begun earlier (Sutton 2001: 433).¹²⁶

The Comoros

From the eleventh century on, Arabo-Swahili expansion accelerated toward the Comoros and Madagascar, within the context of an economic boom in the Indian Ocean and throughout the world-system. At this time, scattered hamlets appeared on the heights of Maore and Mwali; the vegetation of these islands was altered by goats and by fires linked to swidden cultivation (Wright 1992: 84). Towns expanded, and Islam appears to have spread. The town of Sima grew from 3 to 11 hectares between 900 and 1400 (Vérin 1994a: 56). Dembeni covered nearly 15 hectares during the twelfth century; its inhabitants left this site during the thirteenth century and settled nearby on the smaller site of Mjini-Dembeni (Liszkowski 2001). On Anjouan, various levels of settlements have been identified. The main towns of Sima and Domoni had mosques by the eleventh or twelfth century; these mosques were later rebuilt and enlarged during the thirteenth century (Allibert 1988a; Wright 1992, 1993). Stone was used with increasing frequency from the thirteenth century on. During the twelfth and thirteenth centuries, on Mayotte and throughout the archipelago, "populations settled, most of whose tombs show an adherence to Islam" (Allibert 1984: 36). During the thirteenth and fourteenth centuries, centralized political institutions emerged, with kings called *wafaume* unifying earlier chiefdoms, within the context of growing social hierarchization (Blanchy 2011).

The "Shirazi expansion" in East Africa extended to the islands of the archipelago. According to the Comorian chronicles,¹²⁷ immigrants married the daughters of local chiefs. On the other hand, a legend from Ngazija recounts the marriage of a man from this island to a mermaid. The Comorian historian Burham Mkell gives this marriage as the source of the three great royal clans of Ngazija (Vérin 1994a: 57). Similar stories have been collected in Madagascar, where they have become myths of origin for some royal Malagasy clans (Beaujard 1991). Another legend from Grande Comore relates the arrival of a Shirazi princess from Kilwa; this princess is also depicted as being the ancestor of the royal clans. One version of the *Kilwa Chronicle* states that a ship

¹²⁶ Tumbatu (Zanzibar) may have been abandoned at this time.

¹²⁷ Allibert 1988a: 114; Damir, Boulonier, and Ottino 1985: 28. The Comorian chronicles mention "Shirazi" arrivals between the eleventh and sixteenth centuries, according to tradition. The name "Shirazi" was in fact primarily a cultural and ideological referent.

belonging to the father of the six Shirazi brothers sailed to Ndzuani (Anjouan).¹²⁸ The old town of Sima was probably a major commercial center in international trade.

Arabs settled in the Comoros; among them were probably Yemenis – whose presence has been noted along the entire East African coast – especially during the second half of the thirteenth century, when Mahdalī ruled at Kilwa. Few shards of Yemeni black-on-yellow pottery associated with the Mahdalī have been recovered in the Comoros, however. This black-on-yellow pottery appeared in Phase H (1250–1325) at Shanga (Lamu archipelago), while at the same time decreasing quantities of sgraffiato ware from the Persian Gulf were being imported (Horton 1996: 402, 418); black-on-yellow pottery is also present at Mahilaka (northwestern Madagascar).

Various imported ceramics reveal the insertion of the Comoros into Indian Ocean networks. Shards of pottery from Fujian or Guangxi (twelfth–thirteenth century) have been excavated at Mro Dewa (Moheli), a site which has also yielded remnants of a bronze mirror and of blue or green glass vessels (Chanudet and Vérin 1983: 48). The Mwali Mdjini site on Moheli contains various types of sgraffiato ware dated to between the eleventh and the thirteenth centuries (cream-colored with a bistre-incised motif; olive green; and light green- or white-glazed sgraffiato ware), two shards of black-on-yellow ceramic (fourteenth century), Islamic monochrome ware (fifteenth–sixteenth centuries), a kind of celadon, and blue-and-white Chinese porcelain.¹²⁹ According to Vérin, the various types of sgraffiato ware discovered on the archipelago during the period between the tenth and the thirteenth centuries “correspond to those from the Persian Gulf or Iraq, discovered at Takht i Suleyman and even to those found in northwestern India” in the ancient city of Daybul (Vérin 1994a: 56). Besides ceramics, the discovery of fragments of ostrich eggs at Sima and Domoni (eleventh–twelfth century) indicates connections with East Africa (Wright 1993: 115, 118).¹³⁰

Idrīsī has mentioned voyages made by merchants “from Oman and other countries” toward the Zanj coast and then on to the Comoros, with the Comorians themselves going to trade on the East African coast:

[The coasts of the Zanj] are visited by ships from Oman and other countries which, from there, sail to the islands of Jāvaga to sell the merchandise acquired from the Zeng. The populations of these islands of Jāvaga sail to the Zeng country with canoes and smaller ships, bringing with them their own products and, using their languages, they manage to understand one another. (Idrīsī, eighth section, p. 61, Viré 1984: 20)

As noted above, the name “Zabag/Javāga” had been connected to Sumatra, when in fact it refers to the Comoros. Idrīsī writes that the inhabitants of the Zabag Islands and the Zanj understood each other’s languages: at that time, the Comoros must have been

¹²⁸ Freeman-Grenville 1975: 35. The identification of Ndzuani with the Qanbalū site described by Mas‘ūdī, suggested by Shepherd is unconvincing.

¹²⁹ Chanudet 1991: 1115–117. The author also signals various shards of imported pottery that have not been identified (Chanudet and Vérin 1983: 49).

¹³⁰ Moreover, tenrec remains have been excavated at Domoni (Anjouan) dating to the thirteenth century (the consumption of this animal, theoretically, was prohibited for Muslims).

populated by Muslim Africans, who merged with the Austronesians. “The population of this island [al-Angazija, in the language of the people from Jāvaga],” writes Idrīsī, “is a mixture of races and, at this time, the Muslims are predominant” (Idrīsī, eighth section, p. 61, Viré 1984: 21). It is true, however, that the name “Zabaj” in Arab texts usually refers to Indonesia, and more precisely to the Sumatran kingdom of Srīwijaya.¹³¹ Excavated tombs at Bagamoyo (eleventh–thirteenth century) have yielded skulls displaying various types of physical features, probably reflecting the coexistence of people of Austronesian, western Asian, and African origin (in the latter case, skulls with sharpened teeth, a feature mentioned by Mas‘ūdī for the East African coast).¹³²

Moreover, a Malagasy influence persisted. Metallurgic furnaces showing Malagasy features have been excavated at Dembeni (tenth–eleventh century). The furnaces at the Dembeni III site formed two lines, each 150 meters long, with one furnace at every meter.¹³³ Part of the iron produced must have been exported, perhaps to India, based on what we learn from Idrīsī about the Comoros. This production may have used a servile labor force imported from the East African coast. Lime kilns showing Malagasy features have also been unearthed at Bagamoyo (Mayotte, twelfth–thirteenth century). Lime may have been used for buildings.

Idrīsī described the voyages of people from the Comoros and Madagascar to the Sofala coast in order to acquire iron and gold:

The country of Sofāla contains many iron mines and the people of the islands of Jāvaga [Comorians] and other islanders around them [possibly the Malagasy] come here to acquire iron, and then export it throughout India and the surrounding islands. They make large profit with this trade, since iron is a very valued object of trade, and although it exists in the islands of India and the mines of this country, it does not equal the iron of Sofala, which is more abundant, purer and more malleable. (Idrīsī, eighth section, p. 67, Viré 1984: 26)¹³⁴

The Muslims in the Comoros (and Madagascar) thus engaged in trade with Africa and India. Allibert has suggested that these islands may have been a rear base where slaves brought from Africa were kept and used in iron production (Allibert 1996). Chittick and Horton have pointed out the crucial role played by ancient iron metallurgical operations along the African coast. According to Allibert (1998: 313), “this metallurgy implied a triangular Africa-Madagascar-India circuit, and utilized a Bantu labor force.” As previously noted, however, Killick (2009) and Robertshaw (2009) are skeptical with regard to Idrīsī’s testimony on iron exports by East Africa.

¹³¹ Idrīsī writes: “Among these islands of Jāvaga is one called Šarbuwa” (Viré 1984: 21). Ferrand reads Sribuza = Srivijaya = Sumatra, unlike Chanudet, who understands Sribuza to be “the island of the Buzi,” Mbuzi in Comorian being the equivalent of the Swahili “Buki”: the island would therefore be Madagascar (1989: 52). This interpretation is difficult to accept, because the Comorian language has *mbuši* and not *mbuzi* for Swahili *mbuki*, “Malagasy” (Sacleux 1939: 185).

¹³² Allibert 1992: 29. The three skulls excavated at Bagamoyo appear to “correspond to three different geographical populations (from southern Africa, eastern Asia and southern Asia)” (Allibert 1992: 40).

¹³³ C. Allibert, p.c.; Allibert *et al.* 1993: 11, 13, 17ff.

¹³⁴ In addition, J.-C. Hébert (unpublished) recounts a text written by the Persian Al-Kharakī (twelfth century): “In this sea of India, there are inhabited islands and islands with newly settled communities, as many as 1370. Among the islands of this sea are the islands of Al-Zabage, the Al-Dibaja Islands and Kūmere [Komr: possibly Madagascar], and also the island of Cula (Kilwa?), which exports the iron called ‘cali,’ and lastly the island of Sarira, which exports camphor” (see also Ferrand 1913: 170–171).

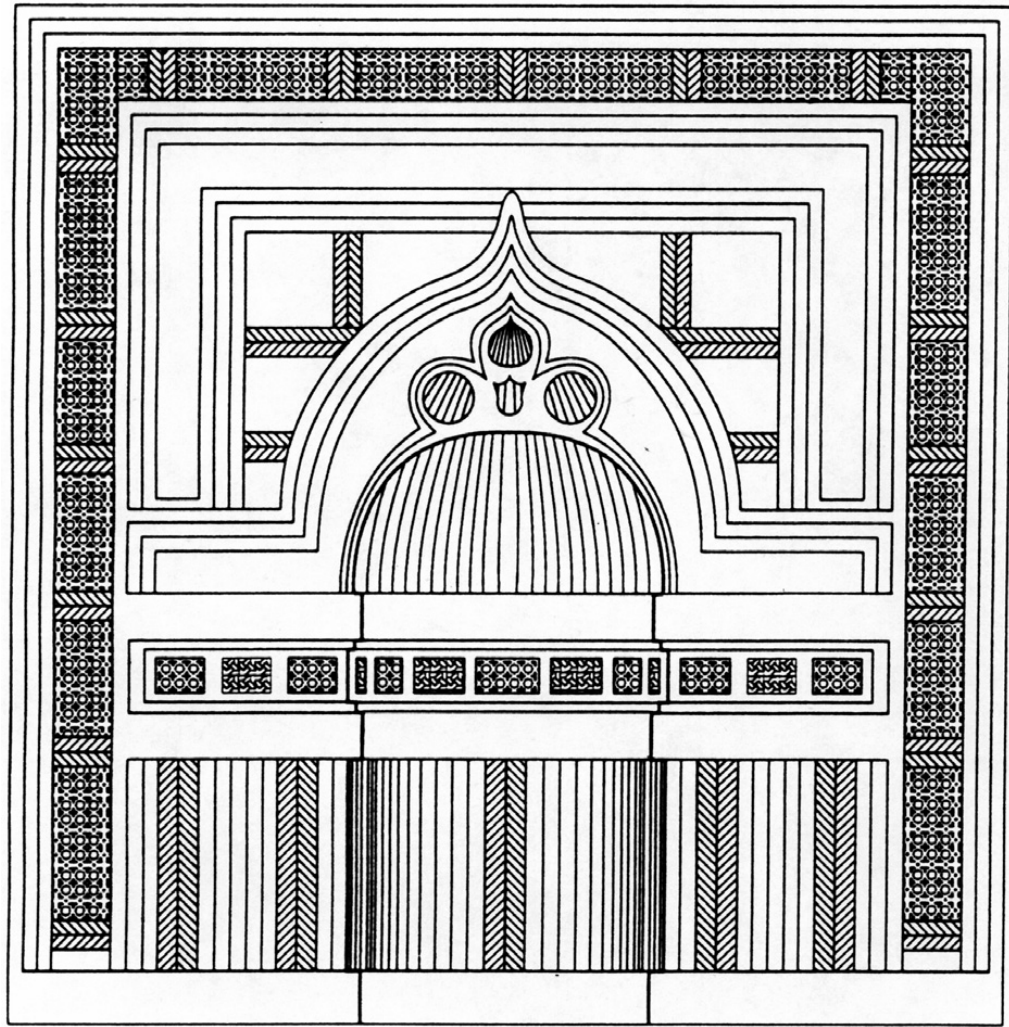


Figure 12.5 Drawing of the *mihrab* of the Domoni mosque (Wright 1992a: 119)

According to Killick, India exported metallic items to Africa instead (the reputation of Indian iron and steel was well established).

During the fourteenth century, the Comoros experienced development paralleling that of the East African coast. P. Vérin notes the “multiplication of stone buildings from the thirteenth century onward” (1992: 67). This period marked the beginning of what Chanudet (1989) has called the “classical period” of Comorian culture. The Comoran chronicles refer to migrations from South Arabia (*Wamanga*), and the Swahili coast, often embedded in myths related to “Shirazi” arrivals (Blanchy 2011). Thus, in Ngazija, the manuscript of Said Bakari reports that after the *beja* “came foreigners from Shiraz and from Kilwa from whom the families of *mfahume* or sultans are descended; [they set] the provinces’ limits; this was the beginning of the reigns of the sultans” (Allibert 1984: 82).¹³⁵ Traditions from Anjouan collected by Silberman signal the presence of Al-Massela from Seti, Mahdali from Yemen, and Ali Bakr bin

¹³⁵ Tradition gives the name “Maharazi” to the *beja* who married a Shirazi woman; this name may refer to India or to Southeast Asia.

Salim from Hadramawt during the fourteenth century.¹³⁶ However, the spread of Islam and growing urbanization as well as increasing social differentiation were not the only consequences of the arrival of Muslim merchants or princes from the west or the north: they also reveal a process linked to internal developments, marked by the flourishing of towns and villages connected to the centers (Wright 1992). Islam was now present in settlements on all four of the archipelago's islands. The political transformations accompanying the rise of Islam seem to have generated local resistance. Some traditions and practices linked to sacred places, or *siliho*, that show similarities with the *hawṭah* of Yemen reflect this resistance (Serjeant 1981; Blanchy 2011).

This social differentiation was marked in Anjouan by the reconstruction of the mosques of Sima and Domoni, with narrower but more elaborate buildings, around the end of the fourteenth century. While the mihrab of the mosque of Sima is now damaged, the *Mkiri wa Shirazi* of Domoni still possesses its magnificent mihrab made of cut coral, well preserved, with a fluted vault, corded moldings, and slabs or briquettes decorated with interlacing motifs (see Figure 12.5).¹³⁷

Beyond the Comoros, what Horton has termed “the Swahili corridor” continued toward Madagascar. The period from the tenth to the fourteenth century saw the increasing integration of this island into the networks of the Indian Ocean, and internal developments, partly due to new arrivals. These processes led to new syncretisms and to the elaboration of highly complex “fringe cultures.”

¹³⁶ Allibert 1988a: 114. On Mayotte, the Tsingoni chronicle by Kadhi Umari describes the arrival of an Arab, Mwarabu, who married the sister of two local *waziri* chiefs; his daughter later married a sharif (Allibert 1976, 1984: 88).

¹³⁷ See the description of this mihrab by Wright 1992a: 119. A mihrab with corded motifs subsists also on Ngazija, in a mosque at Ntsaweni (Mbude).

13

Madagascar: The Development of Trading Ports and the Interior

The archaeology of northern Madagascar reveals settlements dating from the eleventh and twelfth centuries and onward that were in contact with the Comoros, the East African coast, western Asia, and perhaps India and Southeast Asia (Vérin 1990). The development of a town such as Mahilaka, on the northwestern coast of Madagascar, closely mirrors that of Swahili and Comorian cities: in a way, Mahilaka can be seen as an extension of the Swahili world. The Arab geographers show the progressive insertion of Madagascar into Indian Ocean networks. Until the twelfth century, Madagascar was known as the mysterious and ill-located Waqwaq Island; it would later be renamed Qumr (Allibert 2001). During the thirteenth century, Ibn al Muġawir shed light on early ties connecting Aden, Mogadishu, Kilwa, and Madagascar.

The insertion of this island into Indian Ocean trade flows triggered migrations, particularly to the trading centers of northern Madagascar: these probably welcomed Swahili people and Muslims from western Asia, who were merchants and members of communities who had fled their areas of origin for political or religious reasons. The migrants either mixed with the Malagasy populations or lived in settlements which traded with the island's interior.

The rapid development of the Swahili coast and Malagasy trading centers came about with the arrival of various Bantu populations from East Africa on the coasts of Madagascar, particularly in its western part. These movements continued until the nineteenth century. They are still poorly documented archaeologically, but research using genetics and comparative ethnology has been conducted and has brought some results. Arrivals from East Africa may partially explain the existence of a relatively significant population in southern Madagascar (Androy) from the eleventh to the thirteenth century. This region enjoyed a wetter climate between 900 and the late thirteenth century. Discoveries of Chinese and western Asian ceramics on sites located in the interior of the Androy region reflect its links to western Indian Ocean networks. Most Indian Ocean trade during the period from the tenth to the thirteenth century, however, involved northern Madagascar, which has yielded the majority of sgraffiato ceramic finds from the Persian Gulf (Dewar 1996: 477).

Moreover, Austronesians who either sailed along expanding networks through the Maldives or used the south-equatorial current continued to arrive in eastern Madagascar between the twelfth and fourteenth centuries, during a phase of growth in the world-system. Toponyms as well as oral and written traditions preserve the memory of these arrivals under the names Zavaka and Zafiraminia. These events most

likely contributed to the development of new trading centers such as Vohemary, on the northeastern coast. For M. Wood (2005: 201), the Indonesians who arrived on the eastern Malagasy coast may have circumnavigated it to the south (making some stops along the coast) and may have sailed onward to southeastern Africa. In this regard, it would be interesting to compare the chemical analyses of the glass beads found in Androy with those from Indonesia on the one hand, and those from the Limpopo valley on the other.

The indianized and islamized Indonesian influences on Madagascar, already pointed out by Ottino (1986) and Adelaar (1995a, b), may in fact reflect ongoing contacts between Southeast Asia and the Great Island (Beaujard 2003). It may now be more appropriate to refer to a “network” rather than an “arborescent” model to explain how the Malagasy culture was built: it was the product of multiple and repeated contacts and borrowings. Today we no longer aim to reconstruct a “settlement history” dealing with the arrival of successive cultural populations, each often conceived in the past as homogeneous, or even “ethnically pure” – K. Eggert has been correct in welcoming the apparent disappearance of this approach in recent research by historians and anthropologists (2001: 311). In its place, we must understand the ways in which the heterogeneous – both continuous and fluctuating – contributions intervening within the context of Indian Ocean exchange networks began to mix with one another and (after the first settlements) became integrated into indigenous populations, contributing to the development of new organizational forms. The diverse origin and cultural syncretisms shown by the Austronesian migrants and their merging with African and Muslim groups, bearers of various techniques and ideologies, all explain the complexity of Malagasy societies, where cultural convergence existed along with divergence (Wright and Rakotoarisoa 1997: 310); they also explain the adaptation of populations to environments as varied as the east coast rain forest, the thorny, dry forests of the southern regions, the west coast savannahs, and the plains and the mountains of the Highlands.

The Indo-Muslim synthesis studied by P. Ottino for the Zafiraminia and the Malagasy myths of the “Andriambahoaka cycle” – a synthesis already completed in insular Southeast Asia – became even more complex in Madagascar, due to contacts with the inhabitants of northern trading centers. Groups involved in the formation of the *andriana* nobility in Imerina may have arrived during the thirteenth or fourteenth century in the Bay of Antongil (see below). Malay (Sriwijaya) and Javanese (Mojopahit) influences can be seen along the east coast and in Imerina. The Indonesian migrants who arrived between the twelfth and fifteenth centuries contributed to the development of wet rice cultivation and to the emergence of large kingdoms along the east coast and in the Highlands. Other kingdoms on the northwestern coast, marked by African influences, were based upon control of extensive breeding. These kingdoms flourished, thanks not only to new migrations, but also to the emergence of social hierarchies in Malagasy societies, connected to an increasing insertion of the island’s various regions into local and international trade networks, and in the framework of internal dynamics within societies exploiting different types of environments.

Archaeology reveals two groups of ceramics (northern and southern) for the period between the twelfth and fourteenth centuries: they may be considered as two sets deriving from a shared tradition (Dewar and Wright 1993: 440). By contrast, the ceramics found in the Highlands (Fiekena tradition) appear to be different and may reflect East Asian influences, although no clear link with insular Southeast Asia has been shown.

Ecological Changes during the Tenth and Eleventh Centuries

A dramatic environmental change occurred around 1000 in northwestern Madagascar, and from 1000 to 1100 in the Highlands in Itasy and Vakinankaratra. It can be seen in an increase of charcoal in sediments linked to a reduction in pollen from forest species along with an increase in grass pollen (Burney and Matsumoto 1994). Palynological research conducted on Nosy Be (Lake Amparihibe) thus reveals a forest cover over the island from 300 to 1000 CE and the near-disappearance of this forest between 1000 and 1300 CE, due to burning linked to swidden cultivation.¹ The upheaval in natural environments seems to be due to the arrival of new groups rearing cattle in the west and the northwest; these groups rapidly entered the interior of the island.² The disappearance of great subfossils (lemurs, ratites, dwarf hippos, and tortoises), which occurred on a large scale during the eleventh and twelfth centuries, is certainly linked to ecological changes due to human activity, whether it be hunting, burning or livestock production, although concomitant climatic changes also had an impact. Burney and Matsumoto (1994: 21) have noted the complete drying up of Lake Mitsinjo (near Lake Kinkony) between 800 and 1000. R. Dewar (p.c.) also points out the role probably played by the spread of cattle who reverted to a wild state during the environmental transition, a phenomenon noted in many tropical landscapes. No ancient site connected to pastoral populations has ever been discovered, because their settlements left few traces.

According to Dewar (1984: 587), extinctions were already significantly advanced in 1100 CE, in all regions. However, they must have occurred according to different rhythms depending upon regions and species. The extinction of many species has intervened only recently. Thus at Talaky (eleventh or twelfth century, southern Madagascar), fragments of eggs from *Aepyornis* have been discovered at settlement sites. Three teeth of dwarf hippos and a fragment of turtle shell from a now extinct species have been unearthed at Andranosoa, dated to between the eleventh and thirteenth centuries. Testimonies by Flacourt (1995, ed. Allibert: 229) and von Hochstetter (Battistini *et al.* 1963: 121) show that the *Aepyornis* and a large subfossil lemur may have survived up until the eighteenth century.

¹ C. Radimilahy 1998: 47, according to research carried out by D. Burney and the University of Antananarivo. Palynological research conducted in the Sambirano River valley reveals the same picture: low charcoal content prior to 1000, and an increase thereafter (Wright *et al.* 2005).

² In addition, the populating of Nosy Be was linked to the rise to prominence of the city of Mahilaka, on the Malagasy coast. D. Burney points out the likely presence of zebras on Nosy Be during the ninth century (see above) as well as at Lake Kavitaha, in the Highlands, two centuries later (Burney *et al.* 2003: 10802; Burney *et al.* 2004: 35).

The Islamic Trading Ports

Archaeological Data

The Northwest

Founded during the ninth century, Mahilaka is the first city known in Madagascar. Built between the eleventh and thirteenth centuries, its 70-hectare area was enclosed by a city wall. Of a maximal height of nearly 3 meters, this wall served more as a border than as a defense. The city's inhabitants also erected "a fortification measuring over 150 meters on each side, with walls laid in well-fitted, parallel courses of bedrock"; these walls resemble vestiges seen in East Africa (e.g. Bur Gao, in Somalia) (Vérin 1972: 85). This trapezoidal fort, located in the center-south of the city, was its true defense. It was divided into quarters separated by internal walls oriented north-south and east-west; various craftsmen inhabited the fort (blacksmiths, jewelers, and perhaps potters).³

To the east of the fort the first known stone mosque in Madagascar (fourteenth century) has been unearthed; it measures 29.2 x 10.5 meters (prior to this date, the city probably had a mosque built using plant materials). "The mosque was once decorated with carved coral geometric ornaments similar to those on contemporary fourteenth-century mosques in the Comoros and East Africa."⁴ The foundations of another mosque have been unearthed in eastern Mahilaka. Excavations in various locations within the city have also led to the discovery of bases for stone buildings, each containing two to four rooms. Moreover, outside the city, two dams were erected in a valley in the southwest, for the construction of water tanks.

Mahilaka appears to have been connected to a network of nearby villages settled by fishermen and farmers, and to inland villages. Mahilaka also maintained links with the islands of Nosy Be and Nosy Mamoko (to the west of the Ambariotelo Islands), the northeastern coast of Madagascar, and countries abroad (East Africa and the Comoros). From the northeast came chlorite schist, quartz, and raffia fabric, which were reexported, alongside gold (from the Ambilobe region, in the north), iron, tortoiseshell,⁵ wood, resins, and perhaps slaves (iron rings have been discovered). Beads were produced locally, in the southwestern part of the fort (Dewar and Wright 1993: 434). All the site levels exhibit traces of ironwork. The widespread use of weaving may reflect an overseas trade, and also local trade. Ibn Said (thirteenth century) notes: "The natives have a grass [possibly raffia fiber] with which they weave excellent colorful textiles that are exported to Iraq and Yemen" (Allibert 1990: 106).

Ceramic ware as well as fragments of glass and beads at the site's oldest levels indicate links with Indian Ocean networks. One also notes the introduction of the tortoise

³ Radimilahy 1998: 130, 145. An east-west/north-south organization also appears to have prevailed at Shanga (see above). Indian Ocean and China Sea cities usually show traces of the presence of luxury craftsmen, who were housed in special quarters near rulers' palaces or the elites' places of residence, for example at Aceh, Pasai, Malacca, and Manila (Reid 1988: 101-102; Junker 1994: 16).

⁴ The convoluted ornamentation on the upper part of the mihrab show similarities with a mihrab found in the Comoros dating to the fourteenth century (Dewar and Wright 1993; Wright *et al.* 2005).

⁵ Mayeur (eighteenth century) has given an interesting etymology for the ethnonym "Antankaraña," which refers to the inhabitants of northern Madagascar: "people who live in the land where [turtle]shell is traded [*haraña*]" (quoted by Vérin 1975a: 719).

(*Kinyxis belliana*) and the rock dove (*Columbia livia*) from Africa during the twelfth and thirteenth centuries. Various types of ceramics from the Muslim world have been excavated, including white-glazed pottery with a luster decoration known in East Africa from the ninth to the eleventh century, as well as various sgraffiato ware (dated to as early as the tenth century at Dembeni, and from the eleventh to the thirteenth century at Kilwa and Manda). The prosperous period that Mahilaka enjoyed during the fourteenth century coincides with that of Kilwa and the Sofala gold trade. Black-on-yellow Yemeni pottery, possibly coming from Kilwa, then became prominent in the non-Malagasy ware found at Mahilaka (Vérin 1986: 149); also found were Islamic monochrome ware (dated to between the fourteenth and seventeenth centuries at Kilwa); Persian ceramics with white paste (imitating Chinese porcelain found from the fifteenth century at Kilwa); Islamic blue-and-white ware, dated to the fifteenth century onward at Kilwa; non-glazed ware with a cream or grey paste (of a type known at Kilwa from the thirteenth century); and a black-glazed ceramic imitating Martaban pottery, dating to the fifteenth century. It is possible that indirect or direct relations with Yemen led to the introduction of the house mouse (*Mus musculus*) (Duplantier *et al.* 2002).

Ceramics from eastern Asia were rarely imported up until the thirteenth century. The presence of white-glazed Chinese Song pottery dated to the tenth century, and later that of celadon dated to between the eleventh and fourteenth centuries along the East African coast (Radimilahy 1998: 178, 209), has already been noted. By contrast, the relative significance of celadon can be seen during the fourteenth century (in the upper levels, at the end of the fourteenth century, one also finds green monochrome ceramics from western Asia imitating Chinese celadon). Green Longquan bowls go back to this period, as does ivory-white “Marco-Polo” porcelain (dated to the fourteenth century at Kilwa), and Chinese blue-and-white ware (dated to the fifteenth century in East Africa).

Painted ceramic ware from India has also been unearthed, of uncertain date. According to C. Radimilahy, Indian potters may have manufactured it in Madagascar. Research conducted on twenty-nine beads from Mahilaka and two beads from Sandrakatsy (northeastern coast) also points to direct or indirect connections with India. The beads can be divided into two types, according to their chemical composition: some are composed of plant-ash soda glass; others of mineral-soda glass. Both types seem to have links with the Indian subcontinent.⁶ Overall, the beads from Mahilaka are more comparable to assemblages from East Africa than to those from K2 and Mapungubwe, in southeastern Africa (Wood 2005: 189–191). Two beads containing mineral soda, however, are similar to beads found at K2 (Limpopo). Six plant-ash soda glass beads from Mahilaka can be compared to beads excavated at Zimbabwe (1300–1450). This type of bead was traded in southern Africa from the eighth through

⁶ The composition of Malagasy glass made from plant-ash-lime silica is comparable to glass found at Kota Cina (northeastern Sumatra) (eleventh–fourteenth century), which may have originated in India (Robertshaw *et al.* 2006: 101). L. Dussubieux (2010), however, indicates two different South Asian origins for the glass from Sumatra on the one hand, and for the glass from East Africa and Madagascar, on the other. Four beads from Mahilaka contain cobaltite from Rajasthan. One (PR 314), however, has a particular composition linking it to beads found at Zhizo sites in southeastern Africa between 800 and 1000. This bead may have been manufactured in western Asia.

the tenth century and from the mid-thirteenth to the mid-fifteenth century; it may have come from Iran until 970 and from India afterwards.⁷

Many shards of local pottery have been recovered. A red slip is present on 40 percent of the shards. Graphite may have been used, but it is barely visible (Radimilahy 1998: 147). One finds shallow bowls known at Irodo and in the Comoros, and ceramics whose shape imitates that of chlorite-schist vessels (Radimilahy 1998: 157ff.). During the final IIb phase, one notes small plates which were probably used by family chiefs, and larger plates intended for collective purposes, as had been the case up until then in Madagascar. Moreover, footed vessels disappeared during the IIb phase (Radimilahy 1998: 178).

Mahilaka was connected to villages on Nosy Be such as Madirokely, where ceramics similar to those of the Great Island have been discovered (green-glazed sgraffiato, for example); fragments of chlorite-schist vessels (from the northeastern part of the island) and rock crystal have also been retrieved (Wright *et al.* 2005). The site of Nosy Mamoko (Ambariotelo archipelago) shows local ceramics that are found at Mahilaka; green-glazed Chinese pottery has also been excavated, as well as Islamic monochrome dated to the fifteenth century (Wright *et al.* 2005). To the south, on the bay of Bombetoka, the Antetikala site had links with Mahilaka, and with sites in the Bay of Boeny such as Kingany (Wright *et al.* 1996: 45ff.).

The Northern Region and the Eastern Coast

The Gorge of Andavakoera has yielded nearly forty smaller sites dated to between the tenth and thirteenth centuries; they were visited by sailors who left behind ceramics of the sgraffiato type, glass from the Persian Gulf, and Chinese pottery dated to the same period. These assemblages are known in various settlements of northern Madagascar. Glass beads are relatively abundant. Remnants of imported goods appear to be more numerous than those of local goods. These sites were temporary shelters used by men who came to use forest resources (Dewar and Wright 1993: 435; Dewar 1996: 479ff.). They contain the remains of giant tortoises and large lemurs. An islet on the Betahitra River may have been one of the landing spots for these sailors. The islet has yielded sgraffiato and fragments of glass from the Persian Gulf, as well as fragments of chlorite-schist vessels and local pottery (Dewar and Rakotovololona 1992: 8ff.). Northern Madagascar also maintained links with the Comoros, as shown by the presence of Hanyundro ceramics (Late Dembeni, dated to between the eleventh and thirteenth centuries) at Antsiranana and south of the Bay of Antongil, as well as in the northwest, near the Bay of Boina and on Nosy Be (Vérin 1990: 45).

Along the northeastern coast, the main trading ports were Vohemar, which developed around the thirteenth century, and Bemanevika, located south of Vohemar (Vérin 1975a). Recent research conducted at Vohemar has yielded a dating from the ninth century, and a skeleton buried according to Islamic rules has been discovered there (Radimilahy, p.c.). The rise of Vohemar from the thirteenth century onward is likely to have been linked to new Austronesian migrations. Chinese pottery found in

⁷ P. Robertshaw, p.c. The two beads from Sandrakatsy that have been analyzed fall under this category. Mineral-soda glass beads were imported into the Limpopo region between 1000 and 1200, and onto the East African coast from the eleventh to the seventeenth century (Robertshaw *et al.* 2006).

the tombs is usually dated later than the fourteenth century; a few pieces, however, go back to the thirteenth century; this matches a dating obtained in the most ancient part of the cemetery by Vernier and Millot (1971: 24; see below). The abundance of Chinese ceramics,⁸ the presence of other objects from eastern Asia or Southeast Asia, and the extent of the grave's contents – unlike northwestern Malagasy assemblages – all reveal likely relations between Vohemar and both South Asia and Southeast Asia. This hypothesis agrees with what we understand of the Austronesian arrivals from Sumatra and Java between the twelfth and fifteenth centuries.

While one cannot determine the extent of the Islamic presence at Irodo, the skeletons in the cemetery at Vohemar were found lying in positions complying with Muslim practices. This said, depositing objects in tombs is not an Islamic custom, as McBain correctly points out (1992: 71). In general, each tomb contained a single skeleton, but some tombs contained several. The corpse was not always centrally placed in the tomb, but rather set into a recess in the northern wall (for men) or in the southern wall (for women). Gaudebout and Vernier note: “This practice is still common. A dead person is placed on his or her right shoulder in a recess called *tarabintsy*” (1941b: 104). An analysis of the skeletons has revealed the anthropological diversity of Vohemar's inhabitants (Vernier and Millot 1971: 23–24). Unfortunately, the data given by these authors do not allow us to establish possible connections between this physical diversity and social stratifications (Vérin 1972: 28).

The presence of chlorite schist work in northeastern Madagascar has already been pointed out. Stone vessels were a significant part of the discoveries in Vohemar, and control over this stonework must have been one of the sources of wealth for this city. Stone vessels were luxury goods, and were hoarded; they may have played the same role of “currency” as did Chinese ceramics, which were present on a large scale from the fifteenth century onward. As previously noted, such vessels and other stone items were exported to the Comoros and East Africa between the ninth and fifteenth centuries (see above). Malagasy trading ports maintained privileged relationships with some African towns: while a great deal of chlorite schist (probably originating in Madagascar) has been recovered at Manda and Pemba, few chlorite-schist vessels and fragments have been unearthed at Shanga.⁹

The civilization of northeastern Madagascar used chlorite schist to produce not only stone vessels, but also bowls, lamps, incense-burners, troughs, and nozzles for wells. Stoneworking was probably a male domain (Vérin 1975a: 780). Oral traditions link this Vohemar regional culture to an ancient population called “Rasikajy” (cf. Swahili *šikazy*, from the Portuguese *escudo*, meaning “piaster”): Rasikajy would mean “the lords [of the] piasters”; this name can only have been given to this ancient population after the sixteenth century.

Other sites of settlements located mostly near the mouths of rivers, and often near quarries of chlorite schist, have been discovered south of Vohemar. Two of these are Mahanara and Bemanevika, at the mouth of the Bemarivo River; they have yielded shards of yellow and green sgraffiato with a red paste that is not unlike the sgraffiato

⁸ It is possible that among ceramics seen as Chinese, some are in fact Thai and Vietnamese.

⁹ See above. Horton 1996: 354; Allibert 1998. By contrast, for the quartz present at Shanga after 960, Allibert suggests a Malagasy origin, instead of the inner-African origin put forward by Horton.

found at Mahilaka (thirteenth century); at Bemanevika, the lower layers were found to contain a green-brown ceramic of Islamic origin (similar shards have been excavated at Rezoky, in the Bara country). South of Bemanevika, the site at Benavony was first dated to the fourteenth or fifteenth century by P. Vérin (1975a), who corrected his dating to the eleventh century (1992). According to R. Dewar (p.c.), the pottery discovered here reveals a period running between the twelfth and either the fifteenth or sixteenth century.

In the Bay of Antongil, local pottery shows jars and “bowls similar to those of Mahilaka [thirteenth–fourteenth centuries], Irodo [ninth–thirteenth centuries],” and Anosy (fifteenth–sixteenth centuries) during the Tranovato Phase. “Lathe-turned chlorite-schist vessels continue to be common” (Dewar and Wright, 1993: 437). From the fourteenth century onward, one finds ceramics with wavy combing, also known at Irodo and in Anosy (Vérin 1975a: 304–5). In the Mananara region, the Serenambe Phase (thirteenth–seventeenth centuries) shows jars with combing or zigzag incisions. Some graphite-coated shards have been unearthed, such as a fragment of a cup bearing circular imprints of reeds in its interior (Wright and Fanony 1992). Black-on-yellow Yemeni ceramics have been discovered recently. The small sites here described correspond to agricultural communities who settled in valleys and worked iron and chlorite schist. In the region of Fenoarivo, the Lakaria Phase (twelfth–fifteenth century) shows the same types of ceramics.¹⁰

Other discoveries of chlorite schist have been made further south, in the region of Mananjary. In addition to the well-known sculpture of the stone beast kept in the Antambahoaka village of Ambohitsara (see below), other objects carved in chlorite schist have been unearthed in this region: these include a shallow vessel in the Fanantara region; remnants of vessels (without feet) at Mananjary and further south, in the district of Manakara. Quarries have been found in the valley of a tributary of the Mananjary River. This stoneworking is an extension of the tradition of the Rasikajy or Darafify, to the north. In addition, “a fine Baharite [Egyptian] crystal vase has been discovered at Sahafary, near the Sakaleona, among the debris of stone vessels” dated by A. Grandidier to the thirteenth or fourteenth century (this dating is in fact uncertain) (Vérin 1975a: 912).

While it is likely that Muslim merchants visited the southern and western coasts of the Great Island, no Islamic settlement is known for this period, although some sites appear to have had links to transoceanic trade. There are few signs of any direct involvement by the east coast south of the Bay of Antongil in western Indian Ocean networks. Connections did exist, however, between the trading ports of the northeast and those in eastern and southeastern Madagascar.

Arabo-Persians' Accounts of Madagascar

Arabic and Persian texts give the names of Malagasy ports and settlements. Prior to the twelfth century, Madagascar was part of the mythical Waqwaq country. From Idrisi's writings onward, the island was called “Qumr,” a name change revealing a better knowledge of the Great Island and its insertion within Muslim networks.

¹⁰ See Wright *et al.* 1993; Dewar 1996; Wright and Dewar 2000; Dewar *et al.* 2010.

Idrīsī describes travels from Madagascar to Africa. In the Sofāla country, “the people from Al-Qumr and traders from the country of Al-Mahrāḡ go to [Ġuṣṭa, a village where gold was found in abundance] and are welcomed there for their transactions.”¹¹ While Al-Mahrāḡ, the country of the Maharaja, may refer to Sumatra or to the Comoros (due to a confusion between a western and an eastern Zabaj), Qumr is certainly Madagascar (Coedès 1964a: 247ff., 306; Hébert 1993–1994: 14ff.).

Yāqūt, Ibn Saʿīd, Ibn al-Mujāwir (thirteenth century), and Ibn Mājid (fifteenth/sixteenth century), all still give Madagascar the name “Qumr.” This name would later be used to refer to the Comoros. “Qumr,” as Allibert has pointed out, refers etymologically to “an ashen lunar brightness indicating the south,” linked to the Magellanic clouds. “Massignon [1962] had first attributed the navigational use of these clouds to the Arabs, but changed his mind, arguing that the Arabs had borrowed this knowledge from the Indians, who may themselves have borrowed it from the Austronesians” (Allibert 2001: 21). The Arabs sailed southward, toward Madagascar, guided by the Magellanic clouds. Ibn Mājid, in the *Sufāliya*, writes that “the Zanj guide themselves by [these] clouds” (Jouannès 2001: 98). In addition, the Zanj made use of a bird called *qomriyya*, the Qomr dove, when they neared the island. We know that pigeons were employed in various parts of the Indian Ocean (probably as early as the Harappan period in Sind and Gujarat [see Volume 1]) to help sailors find the seashore. Pliny and Cosmas mention their use by the Sinhalese, during the first and sixth centuries, respectively. The practice is also mentioned by a Chinese source from the ninth century, for Persian ships.¹² Al-Jāhiz (ninth century) gives the name of a bird, the *qurb*, which appeared near ships when they were closing in on land, in the country of al-Sufālah (Sofala); another bird, the *samārū* (from the Persian *samārūk*, “pigeon”), appears “at the time of the return of those who have been away” (Serjeant 1988b: 147). In the legend recounting the arrival of the Zafiraminia in Madagascar, the hero Raminia sends a dove three times in search of land.

The use of the name “Qumr/Qomr” for Madagascar has been linked to the term “mountain of the moon” or “Qomr” of a mountain in East Africa (Ruwenzori) where Arab geographers, following Ptolemy’s example, place the source of the Nile (Madagascar is sometimes called “Island of the Moon,” *jazīrat al-qamar*, which should in fact be read as *jazīrat al-qomr*, “island of the southern clouds”).¹³ Qumr/Qomr may also be linked to the name (of Sanskrit origin) of the Khmer kingdom, transcribed by Arab geographers as *qimār*, *qomār*, *qomr*, or *qomayr*; Ferrand suggests that these words are related to the Arabic terms *qāmrūn*, referring to a country of western Asia or to an Indonesian island, and to the title of the king of this country. Ferrand relates these terms to the Kunlun (and *ku-long*) of Chinese chronicles (thus we would have the

¹¹ Idrīsī, ninth section, p. 79, trans. Viré 1984: 34. “From the town of Ġuṣṭa to that of Daḡūṭa, by sea three days and three nights of navigation, and from there it is just one leg to the island of Qumr. The town of Daḡūṭa lies at the border of the gold country of Sofāla and is located in a large estuary . . . In this place one finds gold granules as in the other regions of the territory of Sofāla. Beyond the territory of Sofāla lies that of al-Wāq-Wāq” (Viré 1984: 34–35).

¹² Hourani *et al.* 1995: 109. Cf. Pliny, *Natural History*, vi, 24; Allibert 2001: 22.

¹³ Allibert 2001: 23. The dual reading of *qmr* – *qomr* or *qamar* (moon) – is unsurprising: both terms have the same etymology, referring to brightness (*qamara*: to be blinded by the brightness of the snow).

“fortuitous encounter” of at least three quasi-homonyms, whence all the confusion regarding the Arabic terms *qmr* and the Chinese *kun-lun*).¹⁴ Ibn Saʿīd sees clear links between the Malagasy people and Southeast Asia, and writes that Austronesians settled in both Madagascar and along the East African coast:

The Qomr, who give their name [to the mountain where the Nile was said to have its source], are the brothers of the Chinese . . . [They] lived with the Chinese in the eastern regions of the world . . . The Chinese drove them into the islands and they stayed there for some time. Their king's title was Qāmṛūn. Discord later rose among them while they were living in these islands . . . Then, people who did not belong to the king's family [?] sailed to this Great Island [Qomr = Madagascar] and their sultan settled in the city of Qomoriyya . . . A large number of them went to the south, in the first inhabited lands, along the mountain which bears their name [on the eastern African coast] . . . The island of the Qomr is long and wide; it is said to be four months long and twenty days wide, in its largest width. (Ferrand 1907: 512–513, May–June 1919: 445–446)

The confusion experienced by Arab authors between Qumr (Madagascar) and Khmer, and between eastern and western Waqwaq, are geographically explained, not only by the recognition of a relationship between the Austronesians from Southeast Asia and those from Madagascar, but also by the Ptolemaic conception that viewed the African coast as turning eastward south of the Equator: Madagascar might thus have been believed to be an extension of Sumatra and Java. By contrast, the peninsular shape of the African continent does appear on Ibn Ḥawqal's maps; this casts doubt upon the existence of austral lands (Trimingham 1975: 118).

Given the significance of Mahilaka and Vohemar, we should be able to locate these towns in Arab documents. In fact, the testimonies we find are muddled and vague. Idrīsī writes that “the king of Qumr resides in the town of Malāy,” a name Tibbetts relates to the name “Malay” (Quilon), placed by Ibn Khurdādhbeh on the southwestern coast of India. The state of Malayu-Jambi, on the eastern coast of Sumatra, also comes to mind; it is mentioned in Chinese texts as early as the eighth century. Malay was also the name given by Idrīsī to Sumatra or Borneo: once again, we find confusion – and also perhaps the sign of a recognized relationship – between Madagascar and Southeast Asia (Viré 1984: 29, 39).

Ibn Saʿīd (thirteenth century), referring to a text by Ibn Fātima (now lost), wrote:

¹⁴ The Chinese term “Kunlun,” containing the idea of a swarthy complexion, refers to countries of the Orient and the Occident (see above), as well as to the people inhabiting these countries; during the seventh century, *kunlun* also referred to the Cham script (borrowed from South India), and to the language spoken at Palembang (Sumatra). *Kunlun*, or *ku-long*, are also transcriptions of the royal title *krung* or *kurung* (Old Khmer), *klung* (Old Cham), and *klaung* (modern Cham) (Ferrand 1919: 242ff., 313). The Chinese term *kunlun* can be connected to the names “Qumr” (cf. the name Kunlun cengqi [K'uen-luen ts'eng-k'i] = Qumr Zangi, already mentioned) and *qāmṛūn* of the Arab geographers: Idrīsī mentions a king of this name who was the suzerain of islands near “Suma” [Sumatra?], Ibn Saʿīd writes of “the Qāmṛūn Islands,” located to the east of “Jāwa”; the largest of these islands had a capital and a king bearing this name; Dimašqī mentions a king Qāmṛūn, on an island called Qamār which appears to refer to the Khmer kingdom. On these points, with wordplays on the root *qmr*, see Ferrand 1919: 432–442, and 205ff. See also Wheatley 1975: 86; Tibbetts 1979: 156. Since al-Bīrūnī, writes Tibbetts, a confusion has been introduced between Qmār = Cambodia and data related to Qumr = Madagascar.

Among the towns of the island of Qumr, . . . which is said to be a four months walk long and a twenty days walk along its largest width, one finds Layrāna . . . Like Mogadisho, [Layrāna] belongs to Muslims. Its inhabitants are a mixture of men from all countries. It is a town where ships come and go. The Saykhs who exercise authority there try to remain on good terms with the prince of the city of Malay, which is situated further east. Layrāna is located at 102° – minus a few minutes – of longitude and $0^{\circ}324$ of southern latitude, on a large estuary to the west of the city. (Allibert 1999: 335)

Layrāna, also mentioned by Abū'l-Fidā' (around 1320), may have been either Mahilaka (Allibert 1999: 335),¹⁵ or Vohemar. Shepherd (1982) links Layrāna to Iharaña, the former name of Vohemar, and identifies Malay as the city of Kulam-Malay, in southwestern India.

Probably repeating Idrīsī, Dimašqī (around 1325) gives Malāy as the name of an island located east of Qumr (Madagascar, according to the size of the island, and because the town of Dağūṭa, in the country of the Zenj, was located in the vicinity of Qomr), and as another name for Qumr successively:

The island of Qomr or Malay, is four months [walk] long and one month wide, and faces the island of Sarandyb [Sri Lanka] to the south . . . The *rokh* bird [= *Aepyornis*] lives there. (Ferrand 1907: 519, 545)

According to Dimašqī, “on the island of Qomr, one finds about twenty towns. The largest is called Dahmā; the king lives in Loqmerāna, and the main town bears the name Aghnā.” Idrīsī locates Aghnā on the southern coast of Sirandīb (Sri Lanka), an assertion repeated by Ibn Sa'īd, who gives the name to an island called Silān and to another island named Sirandīb, to the north (= to the east?) of Qumr.

While the Malagasy welcomed ships from various countries of the Indian Ocean, they also sent vessels abroad. “The people from Al-Qumr went [to Ġuṣṭa, on the Sofala coast],” and perhaps to India (see above, Idrīsī, trans. Viré 1984: 26, 34). In addition, Idrīsī describes their piratical habits:

Near this island of Jāvaga lies Kūmura Island [Madagascar]. Its inhabitants are black and are called *al-būqiyyīn*. They wear loincloths and cotton capes. They are wicked and aggressive people . . .; using their boats, they often attack merchant ships, looting their cargoes and food and preventing their passengers from disembarking. (Viré 1984: 22–23)

The name *al-būqiyyīn* is connected to the name *Buki* given to Madagascar and its inhabitants by the Arabs and the Swahili.

Ships from Madagascar also sailed to Arabia, according to an account by Ibn al-Mujāwir (c. 1240):

The peninsula [of Aden] was inhabited only by fishermen. People from Al-Qumr invaded [this peninsula] and took possession of Aden. They expelled the fishermen and erected stone buildings on the mountains . . . From Aden to Mogadishu is one “monsoon” [course], from Mogadishu to Kilwa a second, and from Kilwa to Qumr a third. But these people [from Qumr] would turn the three monsoons into one [they carried out the voyage in a single leg] . . . In 626 [1228], a ship from Al-Qumr sailed to Aden in this way; although it was heading to Kilwa, it

¹⁵ See the map drawn from the text by Ibn Sa'īd, in Tibbetts 1979: fig. 4.

reached Aden in error. Their boats have wings [outriggers] . . . When the power of these people weakened, the Barābar who had come to live with them took the upper hand and expelled them [from Aden].¹⁶ . . . Nowadays, there is nobody left who has knowledge of the maritime activities of these people, or who can tell how they lived and what they achieved. (Ferrand, May–June 1919: 475–479; Ducatez 2003)

This “invasion by people from al-Qumr” may have occurred well before the arrival of the Sirafis, dated by Ibn al-Mujāwir to around 1080. It is doubtful that the Malagasy ship arrived in Arabia in 1228 “by mistake,” especially as the text previously describes regular sea traffic (though placed in the distant past) between Qumr and Aden. Aden was linked to Egypt, and its importance increased after the tenth century. As Hornell notes, the Malagasy probably sailed to Aden because this city was located on a route known to Malay and Swahili merchants (1934: 313). The Yemenis were active during the thirteenth century on the East African coast and the islands (see above). The connections mentioned between Qumr and Kilwa have been confirmed by archaeology, as shown by the discoveries of Malagasy chlorite schist at Kilwa (Chittick 1974, 1: 237). It is possible, however, that the Malagasy abandoned their distant travels northward during the thirteenth century, as Ibn al-Mujāwir writes. Contacts with Arabia were maintained due to the arrival of Muslim merchants. Dimašqī (fourteenth century) signals that feathers of the *rokh* bird, collected on the eastern part of the island of Qumr, were exported to Aden, where merchants traded them (Devic 1975: 240); as suggested by Allibert, this mention of “feathers” should most likely be interpreted as bamboo, due to two Malagasy homonyms *volo* (see above).

Marco Polo and Madagascar

Marco Polo never traveled to Madagascar. However, his account does contain the first known references to the Great Island under the names “Magascar” (Ramusio’s manuscript), “Madeigascar,” “Madaigascar” (Basle’s edition), or “Mogedaxo.” The texts tend to confound Mogadishu with Madagasi/Matacasi (see below):¹⁷ “Madeigascar is an Island toward the south, about a thousand miles from Scotra. The people are all Saracens, adoring Muhammad. They have no king, but four Esheks [sheikhs], i.e. four Elders, are said to govern the whole Island . . . It is one of the greatest [islands] in the world, for it is about 4000 miles in compass” (ed. Moule and Pelliot 1980: 480; ed. Yule-Cordier 1992: 412). This location clearly corresponds to Mogadishu, and when the story recounts sea voyages from India, it is once again Mogadishu – and not Madagascar – which is the vessels’ destination: “The ships from Maabar [Coromandel coast] which visit this island [“Madeigascar”] arrive thither with marvellous speed for great as the distance is they accomplish it in twenty days, whilst the return voyage takes more than three months. This is because of the strong current running south which continues in such singular force and in the same direction in all seasons” (ed. Moule and Pelliot 1980: 481; ed. Yule-Cordier 1992: 412). C. Jouannès

¹⁶ “When they had gone, the place fell into ruin and remained thus until the inhabitants of Siraf moved out [of Siraf and settled in Aden]” (Smith 2008: 138).

¹⁷ The mention of a college of sheikhs recalls Mogadishu and the cities of the northern Swahili coast. But other elements refer to Madagascar (see below).

confirms that sailing with the northeast monsoon from southeastern India in December–January made a two-month voyage possible by taking advantage of favorable winds and currents. The return trip was probably undertaken at the beginning of the southwestern monsoon, toward the western coast of India, and later, by sailing along the coast toward Cape Comorin. It was during this season that “the Arabs used to return home from the Zanj country or sail to Gujarat or Konkan” (Jouannès, in Allibert 2005: 77). Sailors avoided the peak of the southwestern monsoon. “These ninety days mark the ‘closing’ of the sea,” writes Ibn Mājid. Ships could also sail at the end of the southwestern monsoon, but “according to Polo, it seems that this season was not used.” Sulaymān al-Mahrī (sixteenth century), by contrast, “gives the nineteenth of September as the date of departure for Mogadishu and the Maldives” from the Swahili coast. Direct links between the Coromandel coast and East Africa were therefore possible (Jouannès, in Allibert 2005: 77).

Marco Polo adds: “You must know that this island [Madagascar] lies so far south that ships cannot go further south or visit other islands in that direction, except this one, and that other of which we have to tell you, called Zanghibar. This is because the sea-current runs so strong towards the south that the ships which should attempt it would never get back again” (1980: 481; ed. Yule-Cordier 1992: 411–412). This passage most likely refers to the current running southward from Cape Delgado in the Mozambique channel.

Aside from Mogadishu, Marco Polo’s description exhibits a mixture of data about the East African coast (especially about “Zanghibar”) and an island that may indeed have been Madagascar. As C. Allibert has recently pointed out (2005), Polo gives details which imply that his informants did know the Great Island. “It is said that in those other Islands to the south, which the ships are unable to visit because this strong current prevents their return, is found the bird Gryphon, which appears there at certain seasons . . . persons who had been there and had seen it told Messer Marco Polo that it was for all the world like an eagle, but one indeed of enormous size; so big in fact that its wings covered an extent of 30 paces, and its quills were 12 paces long, and thick in proportion. And it is so strong that it will seize an elephant in its talons and carry him high into the air, and drop him so that he is smashed to pieces.”¹⁸ The French manuscript edited by P. Ménard *et al.* adds: “The people of those isles call the bird Ruc, and it has no other name” (2009: 56). This text obviously describes the *rokh* bird of the Arabo-Persian authors, shown by Allibert to be the *Aepyornis* from Madagascar. Marco Polo is the sole author who mentions a seasonal migration of the bird. We know that the great ratites do migrate. While our Venetian considers *rokh* as the name given to the bird in the island of Madagascar, *ruk* in fact is a Persian word which refers to the tower in chess. As already noted, the connection with the elephant may be an oblique

¹⁸ According to al-Sirāfi, “Ibn Lakis told me that while he was at Sofala with one of the kings of the Zanj, . . . a bird of a certain kind [a *rokh*] [had] come down in a certain valley, seized an elephant and torn it to pieces . . . The king ordered them to take its wing feathers . . . One of these feathers could hold two buckets of water” (Freeman-Grenville 1981: 105) (see above on the confusion between the feathers of the *rokh* and the bamboo, partly induced by the existence of the Malagasy homonyms *volo*, meaning “feather, hair” and “bamboo” respectively).

reference to an ivory trade conducted by the Malagasy people (moreover, the elephant is another piece in Arabo-Persian chess, called “bishop” in European chess).

The Great Kaan sent to those parts to enquire about these curious matters, and the story was told by those who went thither. He also sent to procure the release of an envoy of his who had been despatched thither, and had been detained; so both those envoys had many wonderful things to tell the Great Kaan about those strange islands, and about the birds I have mentioned. They brought (as I heard) to the Great Kaan a feather of the said Ruc, which was stated to measure 90 spans, whilst the quill part was two palms in circumference, a marvellous object! . . . They also brought two boars’ tusks, which weighed more than 14 lbs. apiece; and you may gather how big the boar must have been that had teeth like that! They related indeed that there were some of those boars as big as a great buffalo. (Marco Polo, ed. Moule and Pelliot 1980: 482, 483; ed. Yule-Cordier 1992: 412–413)

Marco Polo – or rather his informant – may have known that the Malagasy name for the boar (*lambo*) was the same as that for the buffalo in Indonesia. “The association would be based not on a physical reality but on a linguistic equation: a linguistic equivalence becomes a zoological equivalence” (Allibert 2005).

Did the confusion between Mogadishu and Madagascar arise from Marco Polo or from his informants? While this confusion may have come from the fact that the “people of the sea” who had settled in northwestern Madagascar spoke a Swahili dialect, it is primarily due to a linguistic connection established between the names of Mogadishu and of Madagascar. “Madagascar” is probably linked to the name “Matacassi” noted by the Portuguese in Anosy during the seventeenth century, where it refers to the Zafiraminia kingdom. The final *-car* derives from the Sw. *bara*, “firm ground, country” (Ar. *barr*).¹⁹ The Great Island is drawn on the mappamundi of the Venetian Fra Mauro (1459) with the name “Diab” (possibly from Dīb, from the Sanskrit Diva), and Macdasia is the designation of one of its settlements (Thomaz 2009: 154). On the Nuremberg terrestrial globe by M. Behaim (1492), the island is featured under the name “Madeigascar” and is accompanied by a text taken from Marco Polo. “The mappamundi published in Florence in 1492 or 1493 by Francesco Rosselli bears the name Madagasbar” (Thomaz 2009: 154). The map by Juan de la Cosa (1500) appears to bear the name “Madagasraz.”

Chinese Texts and Madagascar

The mention of Madagascar in Chinese texts reveals the integration – still limited – of the island into international networks. Zhao Rugua here repeats Zhou Qufei and well-known legends from the Muslim world:

There are [there] great *peng* birds which so mask the sun in their flight that the shade of the sun-dial is shifted. If the great *peng* finds a wild camel, it swallows it; and if one should chance to

¹⁹ About *v* or *b/k*, see Beaujard 1998a: 12, 14. This writing does not reflect a “mistake by the scribe,” as L. F. Thomaz suggests (2009: 154). The Malagasy language shows many examples of this shift from *v* or *b* to *k*: *anabavy/anakavy*, *vintaña/kintaña*, *vintokintoka* (duplicate of *vintoka*, “twisted on itself”); the name *kira* in *saonjokira*, “a variety of taro,” is related to the Malay *bira*, *Alocasia* sp. In East Africa, **w* may give *w* or *g* (see **wali*, and *wali*, *wari*, and *kagari* (Nurse and Hinnebusch 1993).

find a *peng* feather, he can make water-butt of it, after cutting off the hollow quill. The products of the country are big elephants' tusks and rhinoceros horns. (Hirth and Rockhill 1911: 149)

The *peng* bird is the Arabic *rokh*, i.e. the Malagasy *Aepyornis*. The association with the camel probably comes from the name “camel-bird” for the ostrich in Persian (*ušturmurgh*) and in Arabic (*teir al-jamal*). One also finds the name “camel-bird” in Chinese in the *Tangshu*.

Coasts and the Interior: Relations between Regions

The insertion of Madagascar into the commercial networks of the Indian Ocean paralleled increased exchanges within the island itself, between ports, and also between these ports and inland regions. As early as the twelfth century, the coasts and part of the Highlands were occupied. As noted above, in the west and south, agriculture was based on African species such as sorghum and legumes (cowpea and Bambara pea): crops that were adapted to relatively dry conditions. On the eastern coast and the Highlands, by contrast, agriculture was primarily based on plants from Southeast Asia such as rice; yams *Dioscorea alata* L. and *D. esculenta* (Lour.) Burk.; taro; and bananas (these plants arrived either directly from Southeast Asia, or from East Africa; see below and Beaujard 2011b, 2017). Moreover, within regions, communities coexisted while occupying different ecological niches: these included fishermen, farmers, stockbreeders, and sometimes hunter-gatherers. These diverse modes of life involved exchanges within and between regions and may reflect the diversity of origins of the first Malagasy; they may also be evidence for multiple arrivals.

Although some differences can be seen among ceramic assemblages (a wavy combing pattern was more frequent in the north than it was in the south, and graphite decoration was more prevalent in the south), the ceramics of northern and southern Madagascar “can be viewed as variations in a common tradition,” but one cannot trace precise links among regional populations, with the possible exception of the northern part of the island (Dewar and Wright 1993: 441). Some ceramic ware belonging to the Fiekena period (see below), in the Highlands, shows peculiar features which are still poorly understood. During the fourteenth and fifteenth centuries, the distribution of a type of pottery using graphite and decorated with triangular imprints, linked to the dissemination of imported ceramics, appears to reflect the development of contacts among regions, as well as that of elites within more stratified societies.

The Highlands: The Fiekena Period

Analyses of sediment in the Itasy and Vakinankaratra regions reveal a growing human occupation of the Highlands after 1100 (Wetterstom and Wright 1992: 152). A more dramatic change in plant cover occurred during the late fourteenth and the early fifteenth centuries; this was probably due to slash-and-burn cultivation and fires set by shepherds. The first known settlements in the Highlands date back to the so-called Fiekena period (from the name of a site, twelfth–fourteenth century), during which

agricultural communities settled near swamps, where they grew taro and rice.²⁰ The villages, from one to two hectares in area, show no marked social differentiation. They were often surrounded by ditches which had no defensive role, but probably helped control cattle. Ironworking has sometimes been noted (Kus and Wright 1986: 52–53). From the thirteenth century onward, hilltop settlements appeared; here, contact was symbolically established between earth and heaven: the choice was surely related to a ruling class (Belrose-Huygues 1983). The link between mountains and divinized ancestors is well attested in Indonesia, for example in Java.

Relations were probably established very early on between the coasts and the Highlands, since ceramics imported from abroad and dated to the Fiekena period have been unearthed in Imerina. The village of Ankadivory (twelfth–fifteenth century), north of Antananarivo, is the largest site from this period (Rakotovololona 1994: 20; on dating, see Wright *et al.* 1992). It has yielded sgraffiato ware and eastern Asian ceramics (celadons, and white porcelain with blue decoration, which corresponds to the fourteenth–fifteenth-century dating obtained at this site). The shape of some local pottery imitates Chinese celadons.

The [local] ceramics differ from those of older and contemporary assemblages on the northwest, northeast, and southeast coasts. [They include] shallow hemispherical bowls [with] flattened bases [each standing] on a single low, roughly cylindrical foot. Most have a standardized decoration consisting of alternating rectangular panels and opposed triangular panels filled with triangular impressions, [themselves] filled with white pigment; most have fugitive graphite coatings. (Dewar and Wright 1993: 440)

Some jars show triangular imprints under their necks.²¹ Cattle bones have been retrieved. Food was stored in granaries erected above ground level, and not in holes as in most of the later sites. Fragments of vessels carved in a stone similar to chlorite schist have been found. According to Dewar and Wright, these elements point to an origin of the settlers on the eastern coast. “Some sherds of heavy vessels with lugs and red-slipped bowls with grass impressions on the inside similar to those of Maliovola [in Anosy]” [have been recovered], revealing contacts between various regions (possibly via the eastern coast) or expressing a common culture (Dewar and Wright 1993: 440). The absence of archaeological research on a large part of the eastern Malagasy coast makes it difficult to interpret the data more precisely (Dewar and Wright 1993; Rakotovololona 1994). It is likely that trade routes also existed between Imerina and the northwestern coast from or toward the Bays of Mahajamba and Boina.

Located at an altitude of 1,445 meters, south of Antananarivo, Ambohimananana was another major site. It was surrounded by a network of moats that were approximately 650 meters long and 250 meters wide. A sample from a ditch has yielded a dating (C_{14}) to the eleventh or twelfth century that cannot be accepted without reservation; another sample – from a shallower level – has been dated to the fourteenth or the fifteenth century (Rasamuel 2000: 6). Excavations have revealed stone structures corresponding to the foundations of wood houses. Two types of ceramics have been recovered,

²⁰ Dewar and Wright 1993: 426; Vérin 1990: 55–56; Allibert and Vérin 1993a: 35; Dewar and Burney 1994: 81, quoting Burney 1987a; MacPhee and Burney 1991.

²¹ See Wright 2007: 44–45.

belonging to two periods, tenth(?)–fourteenth century and fifteenth–eighteenth century. The earliest levels contained various types of pottery also found at Ankatso and Ankadivory, including footed cups, and a few bowls bearing interlaced patterns reminiscent of basketry, using graphite (Rasamuel 1989–1990: 35 fig. 7, and 40 fig. 12; see below). In the western part of the site, tripod cooking pots with handles were found, revealing connections with northeastern Madagascar and its chlorite-schist vessels (Rasamuel 2000, 2001).

While Ambohimananana did not yield any imported ceramic, a shard of sgraffiato was retrieved further south at Ankazomiriotra (near Ambohimananambola, in the Betafo region) (Vakinankaratra). The same area has yielded pottery comparable to that found in Imerina during the Fiekona phase.

To the east of Imerina, excavations conducted at Andavakalika, at a site overlooking the confluence of the Mangoro River and the Sahara River, have unearthed ceramics dated to between the twelfth and sixteenth centuries (Ramilisonina 1990; Wetterstrom and Wright 1992: 154).

The Southeastern Coast and Anosy

Excavations conducted by W. Griffin (1995–1997) have shed light on an early settlement at the mouth of the Matatàña valley and in the same valley between the eleventh and thirteenth centuries during the “Marovahiny Phase”; Marovahiny was a site located at the confluence of the Canal des Pangalanes and the Matatàña River. Ceramic ware here shows similarities with Irodo and with Anosy. A few shards of imported “black-on-yellow” ware have been discovered. For a later period, Griffin has identified a “Mananaño-mouth Phase” (fourteenth–fifteenth century), from the name of a river north of the Matatàña, where sites appear to have been more numerous (Griffin 2009).

In Anosy, an early phase of settlement, called Maliovola, shows communities of a small size; some of these were specialized in certain activities: for example, the site of Maliovola, in the Efaho River valley, was inhabited by farmers; Mokala, on the seaside, further south, and Tsiandrora, in the lower Efaho valley, both contained ceramics dated to between the eleventh and thirteenth centuries.²² Other types of ceramics, including imported celadons dated to between the thirteenth and fifteenth centuries, are seen in Ambinanibe and in the upper levels at Tsiandrora (Wright *et al.* 1993).

In the Efaho River valley, livestock breeding was a significant activity. Its sites show ironworking, and two types of pottery. The first type is a coarse ceramic, consisting of spherical vessels with lugs, and bowls bearing horizontal incisions imitating the marks found on chlorite-schist vessels in northern Madagascar (Vérin 1975a: 83iff.). The second, a finer ceramic, consists of red-slipped (sometimes graphite-coated) bowls. Some ceramic ware is similar to types found in Androy, and along the northeastern coast (Wright and Rakotoarisoa 1989, 1997: 316; Dewar and Wright 1993: 437). Shards excavated at Mokala are decorated with incised lines arranged in chevron patterns, a motif widespread along the East African coast (Martin 2010: fig. 61). While the

²² Maliovola, however, has yielded an earlier dating; see above.

Maliyola phase has yielded no Chinese ceramic, a shard of sgraffiato ware from western Asia has purportedly been found (hardly recognizable) at Tsiandrora (Rakotoarisoa 1998: 56). Anosy was in contact with the eastern coast further to the north: chlorite schist excavated at Mokala necessarily originated either from the region of Mananjary or from more distant quarries. Ceramics imitating chlorite schist also reveal trade with the north.

Following the Maliyola phase, and in continuity with it, various assemblages have been identified, belonging to the so-called Ambinanibe phase (fourteenth–fifteenth century), “with many spherical jars with incised and appliqué decoration” (Dewar and Wright 1993: 445). Some bowls are graphite-coated (Rakotoarisoa 1994a: 53–54; see also Wright *et al.* 1993: 71; Rakotoarisoa 1998: 40, 65). Ironworking seems to have been more significant than during the Maliyola phase. Moreover, Ambinanibe has yielded a ceramic spherical spindle, a sign of weaving activity. At Tsiandrora, abrasives made of coral have been unearthed, as well as fragments of chlorite schist. Some villages were home to specialized communities, which must have exchanged their resources with other groups. The sites show no signs of social differentiation; this would no longer hold true during the ensuing period.

The sites of the Ambinanibe period had links with sea networks. Ceramics from eastern Asia (Longquan celadons, dated to between the thirteenth and fifteenth centuries) and local imitations of celadon bowls have been unearthed at Ambinanibe, Tsiandrora, and Efangitse, where fragments of glass have also been retrieved. Ceramics with appliqué decoration have been compared to ceramic ware from Moheli, dated to the same period (Chanudet and Vérin 1983; Rakotoarisoa 1998). The presence of chlorite schist reveals trade along the east coast.

The South

To the west of Anosy, various sites dated to the tenth through thirteenth centuries have been discovered in Androy; in the interior (Andaro, Andranosoa, Beropitike, Androvontsy . . .), and along the coast (Maroaloke and Talaky). At that time, this region was relatively populous and the settlement of the first Malagasy was certainly older. However, the density of population observed may be linked to the arrivals of migrants (Africans?) during the tenth and eleventh centuries. From 900 to 1300, a warm and wet climatic phase held sway in southern Africa and in the southern Malagasy region (Huffman 2000: 16, 24; see above). The end of this wet phase coincided with the decline of the Androy sites. As in Anosy, communities with various ways of life coexisted. Talaky, near the mouth of the Manambovo River, was a fishing settlement dated to the twelfth or thirteenth century (Dewar and Wright 1993: 439). This site has yielded pottery with graphited decoration and parallel incisions, as well as other ceramic ware known at inland sites such as Andranosoa. Some pottery from Talaky is comparable to pottery found in caves of the Fort-Dauphin region, indicating connections between Androy and Anosy. The region of Talaky has yielded sgraffiato ware from the Persian Gulf (discoveries by M. P. Pearson, p.c. by C. Radimilahy). Enijo, at the mouth of the Menarandra River, contains pottery similar to East African Plain Ware from the eleventh through thirteenth centuries (Pearson 2011). Further

west, at the mouth of the Linta River, sgraffiato and ceramic ware similar to what has been found in Anosy have been excavated, along with remnants of *Aepyornis* eggs (Pearson 2011).

In the interior, the oldest pottery consists of basins and spherical vessels with lugs, as found at Beropitike or Androvontsy (Heurtebize 1986a: fig. 24a; Pearson 1997: 238, 240). Dated to the twelfth and thirteenth centuries, Androvontsy contains the remains of subfossil animals. In Maroaloke, a C_{14} measurement has yielded an eleventh-century dating. According to M. P. Pearson, “there may have been a phase of human occupation during which the ancient inhabitants did not use pottery” but instead used *Aepyornis* eggs. There is only “one group of sites, at Talaky, where a stratigraphic association can be observed between humans and the eggs” of the giant bird (Battistini *et al.* 1963: 120; Pearson 1997: 240).

The most significant site, Andranosoa, at the junction of the Manambovo and Andranosoa rivers, dates back to the eleventh century and was occupied until the seventeenth century (Heurtebize and Vérin 1974: 113ff.; Emphoux 1978: 39ff.; 1981: 90). A stone wall (called a *manda*) enclosed an area measuring 50 hectares. Andranosoa has yielded cattle bones, and more significantly sheep and goat bones, revealing a pastoral economy (Rasamuel 1984b). The remains of domestic cats have also been discovered. Alongside a coarse type of pottery, there was also a finer, red-slipped ceramic with graphite decoration,²³ as well as Islamic ware (sgraffiato with a pink paste, known at Mahilaka, Bemanevika, and in the Comoros, and East Africa) and Chinese ware (white Song porcelain, and stoneware). A fragment of blue glass is similar in appearance to glass “produced in Egypt since the seventh–eighth century” (Radimilahy 1988: 162 n. 54, quoting Wright p.c.). One cowry has been discovered, and other seashells. A few iron items reveal ironworking (Radimilahy 1988: 60). Fragments of the shell of a giant extinct tortoise and *Hippopotamus lemerlei* teeth have also been recovered. The finds indicate a certain degree of social differentiation. As previously noted, red-slipped pottery with black and white decoration using graphite has been excavated at sites on Nosy Be (see above). Human occupation at Andranosoa was more limited during the fourteenth century; the population appears to have been declining at this time.

At Andaro, walls enclosed two villages of 20 and 5 hectares respectively, located one on either bank of the Volovololo River (Heurtebize 1986b: 173ff.). Here, Chinese celadon has been unearthed, as well as at Tondalava. Another large *manda* has been discovered near the headwaters of the Manambovo River, near the village of Mafelefo, and other smaller *manda* are located to the east of this river. Amanda-Vohidolo, dated to between the tenth and thirteenth centuries, thus shows a stone enclosure, as well as a type of fine red-slipped pottery with graphite decoration (Pearson 1992: 945). Large enclosures at Lintamandanimeriñe (Gogogogo), in the Mahafaly country, and Mandan-dRamananga, between Gogogogo and the Manambovo valley, have yielded sgraffiato ware from the Persian Gulf. The sites with *manda* differ from smaller sites without enclosures: they contain pottery featuring thin plates and red-slipped basins. “While these enclosures are essentially dated

²³ See Radimilahy (1988) on “bowls with graphited feet or decorated with geometrical patterns with graphite, red ochre and lime on the inside.”

to the same period as Great Zimbabwe, they do not exhibit the same elaborate and complex architecture” (Pearson 1997: 240). Stone enclosures, red-slipped pottery with graphite decoration, and the predominance of stockbreeding, however, are characteristics shared with East Africa, as is the relief decoration of some ceramic ware, which suggests a link between southern Madagascar and East Africa and its insertion into Arabo-Swahili trade networks around the eleventh and twelfth centuries (Pearson 1992: 947). As previously noted, East African Triangular Incised Ware dated to the late first or early second millennium has been found at the mouth of the Menarandra River; this is the only discovery of this type of pottery in Madagascar.

During the ensuing period (from the fourteenth century onward), new ceramic ware appeared, of the Rezoky type; it is known at eighteen sites.²⁴

Western Madagascar

Western Madagascar between the Fihereña and Maintirano rivers remains sparsely prospected, archaeologically speaking. Excavations conducted along the coast between the Oñilahy River and the town of Morombe have shed light on the homogeneity of a type of pottery showing combed decoration, which has been made for centuries (Battistini and Vérin 1971). Research in the Bay of Saint-Augustine has revealed no sites dated prior to the fifteenth century, although this bay had long been a stopping place for ships.

Inland, in the region of the Isalo massif, surveys have led to the discovery of sites at Rezoky and Asambalahy. Rezoky, which covers several hectares, has yielded various types of pottery showing motifs with triangular imprints and relief zigzag lines that are similar to decorations known at Kingany (dated to the fifteenth and sixteenth centuries); these motifs have not been found at Asambalahy. Ceramic ware from Rezoky has also been compared to pottery from Androy and Anosy (Ambinanibe Phase); examples include spherical jars with appliqué and oblique incised lines (Dewar and Wright 1993: 446). Rezoky has not yielded any red-slipped or graphite-coated ceramics, however. This site shows connections with maritime trade networks: shards of Chinese (brown jar and celadon) and Islamic ware (imitating celadon) have been excavated, as well as Indian beads. An artifact made of bone may have been a chess piece, a game described among the Tañala at the beginning of the twentieth century under the name *samantsy* (from the Arabic *samt*, “path, road”), and known in Arabico-Malagasy *sorabe* manuscripts as *fanorobe*, “Great [One] who shows [the path].”²⁵ Basing themselves on the types of sgraffiato ceramics and celadons that have been discovered, Dewar and Wright (1993) have suggested a more ancient dating (thirteenth–fifteenth century) for Rezoky than previous estimates (fifteenth–seventeenth century). Moreover, Rezoky has yielded the first dog bones known in Madagascar, and what could be the remains of *Aepyornis*.

²⁴ Vérin 1971; Dewar and Wright 1993: 446; Pearson 1997: 243. These ceramics also show parallels with the Ambinanibe Phase in Anosy.

²⁵ In several *sorabe* manuscripts, a kind of poem can be found relating to chess pieces and their symbolism, in connection to social hierarchy.

The smaller site at Asambalahy (1 hectare) contained pottery with vertical, horizontal or oblique appliqués. This type of decoration, known along the East African coast, has been found on only one shard at Rezoky. Punctiform imprints can be seen under its edge, as well as combing in vertical, horizontal or oblique lines. Asambalahy has yielded imitations of celadon of Islamic origin, which J. Kirkman has dated to the fourteenth or fifteenth century at Gedi, and one shard of a Persian ceramic with a bluish coating, thought to belong to the sixteenth century at Gedi (Vérin 1971: 42). Moldings on some locally produced vessels imitate fluted celadon. Dewar and Wright suggest a dating of between the fourteenth and sixteenth centuries for Asambalahy.

Both sites exhibit traces of ironworking, textile crafts (spindles have been found at Rezoky), and stockbreeding, along with hunting. According to Vérin (1971), it is likely that Rezoky and Asambalahy reveal “the presence of herder-hunter-smiths of the Bantu culture along the West coast.”

Trade Networks and Syncretisms

African Inflows

Changes affecting Madagascar during the late first and early second millennia were linked in part to arrivals from the East African coast. These inflows of Bantu speakers continued for centuries, in connection with the rise to prominence of Swahili cities. Researchers have used various approaches and sources in an attempt to comprehend the significance of the African inflows.

The Genetic Data

Genetics is one recent research approach. Soodyall *et al.*'s publication (1996) has taken into account a β^S gene, responsible for sickle cell anemia, to which five – four African, including one “Bantu,” and one Arabo-Indian – haplotypes have been connected (the β^S gene is not found in Indonesia). The study reveals a significant African influence in Madagascar, from African regions inhabited by Bantu speakers.²⁶ The gene frequency is much stronger on the coasts, especially along the east coast, than it is in the Highlands, due to the selective effects of malaria, and to sizeable African contributions along the Malagasy coasts. The Arabo-Indian haplotype is absent: there was probably no major Arabo-Indian contribution to the Malagasy genetic stock (Fourquet *et al.* [1974] have suggested “Indian” origins for black Malagasy people). Analyzing the sequences of a region of mitochondrial DNA, Soodyall *et al.* show that the haplotypes associated with the deletion of nine base pairs located between the genes that code for transfer RNA for lysine and cytochrome oxidase II (COII/tRNA^{Lys} 9bp deletion)

²⁶ A previous genetic study, based on blood groups and the characteristic of sickle cells, stated that two-thirds of the Malagasy gene pool were of African origin (Singer *et al.* 1957). This study attempted to show that the introduction of Haemoglobin S (sickle cell trait) into Africa was relatively recent, and may have been concomitant with that of the Indian zebu, via Arabia, around the seventh or eighth century. The arrival of the zebu in Africa, in fact, is much older (see Volume 1).

suggest an affinity of the Malagasy people with populations from Mozambique (along maternal lines).²⁷

Control region sequence analyses suggest that the Malagasy are more closely related to Bantu-speaking Negroids from southeastern Africa with the African form of the 9bp deletion. Since the β^S gene is extremely rare in Bantu people who settled south of the Limpopo River, possibly because they migrated into the southern African continent before the β^S gene arose, the ancestors of the Malagasy must have originated from southeastern Bantu between the Limpopo and Zambezi rivers. (Soodyall *et al.* 1996: 164)

The African influence is strongly felt in the southern and southwestern parts of the island. Remember, however, that Soodyall *et al.*'s work is based on limited sampling.

The study conducted by Tofanelli *et al.* (2009), similarly limited, partially invalidates Soodyall's conclusions by showing the influence of haplotypes of the central and west African type in Anosy and in the Malagasy Highlands. Moreover, using studies on Y Chromosome DNA, which shed light on paternal history, Tofanelli *et al.* "estimate the proportion of Indonesian to African ancestry to be 39%:50% for the Highland groups, and 20%:74% in the coastal population" (2009: 2114; Soodyall *et al.* 2013: 33). In contrast to mtDNA studies, "Y chromosome data are consistent with a larger African input to the gene pool of the Malagasy" (Soodyall *et al.* 2013: 33).

Using autosomal DNA markers, which carry information inherited from both parents, Soodyall *et al.* indicate that "the African contribution is estimated to be 32.5% in the Highlanders, and 58.8% in the coastal groups" (2013: 35).

Ancient African arrivals (going back to the ninth and tenth centuries) can be envisioned along the entire western coast of Madagascar, given the data available in the northwest and in the south. Written and oral sources provide interesting evidence.

Written and Oral Sources

Texts and oral traditions have preserved the memory of an African origin for some groups, who may have come from the Comoros or directly from the African coast, and were the bearers of a hybrid culture. The data available usually seem to refer to periods after the fifteenth century (see below). Some traditions, however, may go as far back as the thirteenth and fourteenth centuries.

For northeastern Madagascar, the mysterious Rasikajy have been mentioned; legends report the arrival of other groups, some still present today. In the region of Vohemar, the Anjoaty settled very early on as "masters of the mouths [of rivers]." While tradition holds that they originated in Maka and the mythical island of Mojomby, another source mentions the Anjoaty as coming from Mozambique (Vérin 1972: 64). People of various origins are in fact included under the name "Anjoaty," but they share a "cult of river mouths" (Hurvitz 1986: 109). While Maka may be the holy city of Mecca, the Old Persian word "Makā" refers to Oman and to the territory of the United Arab Emirates; moreover, on Mozambique Island, this name was also applied "to people who bought

²⁷ In addition, "in the Malagasy with the 9bp deletion, 70.7% of the mtDNA lineages can be traced to Asian origins, and the remaining 29.3% to African origins" (Soodyall *et al.*, 2013: 27). Hurles *et al.* (2005) found that 37.8% of the mtDNA originated in Africa. See Volume I, Chapter 15 for an inventory of genetic studies.

slaves, . . . slaves from the continent being called Makua,” a well-known name in Madagascar. Maka or Makha was also the name “given to the métis and Islamic population of the entire coast of the Indian Ocean extending from Porto Amelia to the Ligonha River” (Macaire 1996: 40). According to a well-known legend, Mojomby was an island located between Africa and the Comoros. “As impiety and discord spread, the island was submerged by a calamity [flood] sent by God; the righteous men who survived came to settle the northwestern coast [of Madagascar]” (Vérin 1979a: 52).²⁸ Kent has linked Mojomby to the old name “Mussambidji,” referring to Mozambique (Arabic “Musambiji”). The Kajemby of northwestern Madagascar (Bays of Boina and Marambitsy) also claim to have originated in the mythical island of Mojomby, as do the Mananadabo, some *antalaotse* and the people of Mayotte. A Kazembe population is known in East Africa, southeast of Lake Moero. In addition, Kazembe means “chief” in the Nyanja language in Zambia and Malawi (Kent 1970: 174 n. 54). Other African groups probably settled along the western Malagasy coast (where they practiced fishing, as the Antavelo and Vezo did later) and in the interior, as herdsmen and farmers.

The Anjoaty migrated along the eastern Malagasy coast at the same time as other groups (prior to or alongside the Zafiraminia); they settled at the mouth of the Matatāña River, on the southeast coast, where they are known today under the name “Onzatsy.”²⁹ Flacourt also describes “the Onjatsy” in Anosy during the seventeenth century. A. and G. Grandidier have argued that the Onjatsy “are descendants from the Azd tribe” (from Oman; see above in Mas’ūdī); the derivation Onjatsy < *ona* (“people”)/Azd is plausible. To this day, wherever they are present, it is the Anjoaty/Onjatsy/Onzatsy’s responsibility to unplug the mouths of rivers, using paddles: the Onzatsy practice this rite at the mouth of the Matatāña River, and P. Vérin has witnessed the ceremony near Antalaha. The Anjoaty (Vohemar) bury their dead in sand along the coastline. They are known not only as the “masters of the mouths,” but also as the masters of the soil, because their ancestors are buried at the mouths of rivers. The descendants of the ancient inhabitants of Vohemar formed a special Anjoaty group, who were cemetery guardians. Among the Antanosy, during the seventeenth century, the Onjatsy were also the guardians of cemeteries located on an island at the mouth of the Fanjahira River (Hurvitz 1986: 113). Everywhere, the Anjoaty/Onjatsy still refer to themselves as “holy mouths,” an expression linked to the supposed efficiency of their speech, and to the fact that, as “masters of the soil,” they accomplish blessings by blowing water out of their mouths.

Northern Madagascan tradition associates the legendary giant Darafify with the arrival of the ancestors of the Anjoaty, and with the introduction of cattle. According to a legend collected by Dandouau (1922: 382ff.), Darafify, an Anjoaty originating in Arabia, settled at Bobaomby (“where the oxen are cheap,” at the northern tip of the island); he then departed for the south, taking with him a red cow (one with eight udders) that he had carried aboard a ship from Arabia. The cycle of Darafify symbolizes migration along the eastern coast (perhaps linked to a trade in aromatics) of people

²⁸ In the bay of Ungwana, a place called Ungama is said to have disappeared under floodwater, “punished for its outrageous arrogance” (Verne 2005: 54). Around the tenth century, the sea level along the East African coast was lower than it is today: rising sea levels may have submerged some sites (Radimilahy 1998: 47).

²⁹ The spelling used here. Other authors write “Onjatsy” also for the Matatāña group.

from ports controlled by the Rasikajy, who were known for their ironwork and carving of chlorite schist (see Domenichini-Ramiaramanana 1990). Copal (the resin from the copal tree, *Trachylobium verrucosum* Gaertner, a plant of the Caesalpiniaceae family), was probably one of the products coveted by traders, along with the resin of *Calophyllum inophyllum* L. The copal tree was also found on Zanzibar and along the East African coast. In Madagascar, copal is known as *tandrorofo*, *mandrorofo*, and *sandarusy*; according to Sacleux, the latter term, found in Swahili, may derive from Arabic or Hindi. The Zafiraminia are linked to this migration, traditionally associated with cattle breeding (Darafify's "itinerary" along the east coast mentions place names that are found in legends recounting the arrival of the Zafiraminia). According to a legend reported in an Antemoro Arabico-Malagasy manuscript, "the footprints of Kidivanga can be seen in the rock, near the Sakaleo(na) River," a place which is also given as an ancient Zafiraminia settlement, north of Mananjary (Kidivanga, "Petty Trade," is a giant, the "brother" of Darafify).³⁰ Near Ambodisiny, to the south of Toamasina, according to the version collected by Dandouau, one can see traces of Darafify's feet and the imprints made by the hooves of the zebu he killed for his father-in-law's funeral. Ambodisiny is a site linked to Zafiraminia legends; here, in 2010, C. Radimilahy has unearthed sgraffiato ceramics dated to the twelfth century, as well as Islamic monochrome ware from the fourteenth century (p.c.). The motif of a mythical or historical figure whose footprint is visible in stone is known in western Asia and in South Asian and Indonesian legends.³¹ This motif has been used in the Islamic myth of Adam's fall: the first man left his footprint, 70 cubits long, on the mountain of Sri Lanka, where he fell after being expelled from Paradise.³²

Various etymologies have been suggested for the name Darafify. While Grandidier translates the term as "the man with cheeks of a clear red color, like the ripe fruit of the [*dara*] Madagascan palm-date" (1908, 1: 135, n. 1), Allibert has linked the name to Afify, a clan of Mogadishu (tenth century) and the Arabic *dār*, "house" (1984: 183ff.). B. Domenichini-Ramiaramanana connects the name Darafify with the Persian *dār*, "tree," and the Malagasy *fimpy*, the name of an aromatic tree (*Haematodendron* or *Mauloutchia* sp., according to Boiteau), or the product from the operculum of some shellfish of the *Murex* type, which may have been exported in the form of powder (?).³³ She has also linked the name of another giant, Darafely, to that of wild pepper (*ferifery* or *tsimperifery*) (1990: 731). In the Highlands, the giant bears the name "Rapeto" referring to both iron and the slave trade (cf. the Swahili *mapeto*, "ring," and the Comorian *mapeto*, "fetters of a prisoner"). A legend refers to Rapeto as the husband of Rasoalao, a Vazimba woman who lived near Lake Itasy and whose name remains linked to the humpless cattle called *jamoka* (Callet 1981, 1: 16–17, 239). This term can be

³⁰ Munthe 1982: 220–221. B. Domenichini-Ramiaramanana links the name of this giant to trade along the eastern coast.

³¹ On the footprints of the king of Tārumā, see above. On feet or footprints as symbols of divine and royal power, see Wolters 1970: 100–101.

³² Bosworth 1988: 39. In Sudan, one myth speaks of a giant footprint from the camel Muhammad rode when he ascended into Heaven. Christian tales from the West also mention footprints left by the horses of saints.

³³ A shellfish from the Red Sea provided *onycha*, a fragrant substance mentioned in Exodus (30: 34–35), and used in various perfumes.

connected to the Arabic *jāmūs* or *jāmūš*, from the Persian *gāv-mesh*, or *gāmūs*, *gāmesh*, referring to buffalo, with the final *-ka* still unexplained (possibly an Indian influence). Curiously, the legend states that “the introduction of pig breeding goes back to Rasoalao” (Callet 1981, 1: 23 n. 28). Humpless cattle were also described as *manga*, a Swahili term referring to something from Arabia. “They could be tamed, bred and used for riding” (Callet 1981, 11: 698–700). “When the [Merina] king went out to hunt wild cattle, which was a sacred hunt, he prayed to Rasoalao” (Raison-Jourde 1991: 63).³⁴ Carrier oxen are featured in Zafiraminia traditions.

A connection between the giants and rice is mentioned, but appears to be less significant than their link with oxen. Traditions collected in the Betsimisaraka country and at Farafangana recount that Darafify, who lived in the region of Andevoranto, cultivated two rice fields which have now become massive bodies of water: the Rasoabe and Rasoamasay Lakes, named for his two wives whose tears, when he died, filled the rice fields and transformed them into lakes. On these lakes, “neither pigs nor fat could be transported” (Vérin 1986: 81, quoting Macquarie). In a Merina legend, Rapeto cultivates “the swamp of Itasy.”³⁵ The development of wet rice cultivation with regard to the Zavaka, the Zafiraminia, and the ancestors of the Merina kings will be commented on below.

When he settled on the east coast, Darafify had to fight a devastating serpent (most likely a symbol for the autochthonous populations) and another giant (Fatraipatanana or Darafely), representing either native groups or other migrants. The myth of a hero who must vanquish a (seven-headed) serpent before the country’s populace will recognize him as king is also found among the Antemoro ruling nobility, who arrived during the late fifteenth century in southeastern Madagascar. This myth has parallels both on the East African coast, with the hero conquering a “Swallowing Monster,” and in Indonesia. A huge serpent, Sikatimuna, is said to have devastated the Minangkabau region at the beginning of the twelfth century; legend holds that the sword that slew the serpent is part of the *regalia* of the sultan of Minangkabau (Skeat 1900: 28 n. 2). In fact, this theme appears to be universal (see Frazer 1998: 72).

Comparative Anthropology

While the Malagasy language remains primarily an Austronesian language, cultural data reveal the significance of African influences: in agriculture, in zebu breeding (with

³⁴ Vazimba is the name given to the first inhabitants of the country and to the spirits of the earth in the Malagasy Highlands (since the fifteenth or sixteenth century?) (see below). In contrast to the concept of “fringe culture” that he has put forward at times, P. Ottino has not avoided the pitfalls of “ethnicism,” or of an “imaginary ethnicity.” In his article entitled “Vazimba” in the *Dictionnaire des peuples* (1998), he thus writes: “A collection of scattered communities in the center west of Madagascar. They are what is left of ancient Indonesian populations, probably originating on the Malay peninsula and/or in various coastal regions of insular Southeast Asia. They lived in the central Malagasy Highlands prior to the first Merina arrivals (xiii–xiv centuries). More precisely, the Vazimba are the descendents of groups who fled during the second Merina wave (xvi century).” The “Vazimba” question provides a good example of the pitfalls of ethnicizing approaches.

³⁵ On Darafify, see Macquarie 1884: 192–193; Catat 1896: 25; Renel 1930: 186; Vérin 1972: 86, 97–103. On Rapeto, see Callet 1981, 1: 16–17, 239.

notch marks on the ears); in the field of musical instruments; in some body practices such as tooth filing; and in the politico-religious domain (mythology, beliefs, and rituals). This influence is seen not only along the west coast, but also in the Highlands and along the east coast (Vérin 1980).

Various plants were brought from Africa during ancient times; the terms – of Bantu, or Arabic origin, via Swahili – referring to these plants are known throughout the island. Sorghum, *Sorghum bicolor* (L.) Moench, which bears the name *ampemba*, *ampemby*, from the East Proto-Bantu **pemba* [Nurse and Hinnebusch], has certainly been introduced many times into the Great Island.³⁶ One variety of sorghum (*S. roxburghii* Stapf), “cultivated in South India and in East Africa,” bears the name *morama* in northern Madagascar (Boiteau *et al.* 1999, 111: 47), from the Comorian *mrama*, “sorghum” (cf. Swahili *mtama*).

The cowpea, *Vigna unguiculata* [L.] Wal. (Fabaceae family), is known in most of Madagascar under the name *voanemba*, *voaemba*, which is linked to the Shona *nyemba* (*Vigna unguiculata*) (Hannan 1987: 946). This connection implies ancient relations between the Zambezi region and Madagascar’s west coast. The term *nyemba* is also known in languages spoken in regions near the Shona area: Yao, Sena (*Vigna unguiculata*), and Nyanja.³⁷

The Bambara pea *Vigna subterranea* (L.) Verdc. is called *voanjo* (*voa(n)/njo*) throughout the island, from Proto-Bantu *-*jũgũ* [Guthrie]. Its arrival is ancient; remnants of *voanjo* have been unearthed at the Lohavohitra site dated to the fifteenth–eighteenth century (Imerina).

The melon plant was also introduced from East Africa in ancient times. Its name *voatango*, noted in many regions of the island, derives from the Swahili *tango*, “cucumber, melon,” from Proto-Bantu *-*tàngà*, “pumpkin, cucumber” (Guthrie). Watermelon appears to have been introduced at various times, both directly from the East African coast, and indirectly via the Comoros. Flacourt mentions this plant in Anosy during the seventeenth century, using the name *voamanga* which reveals Swahili and, further back, Arabic origins.³⁸ The adjective *manga* in Swahili is applied to “things thought to have come from ‘Arabia’” (Sacleux 1939: 501; see above) and, in Madagascar, to objects or men of East African origin. *Manga* is present in many names of cultivated plants, which often arrived more recently than the time dealt with in this chapter. Watermelon is known as *hetsihetsy* in Antankaraña, *voanketribetry* or *voa(n)ketsihetsy* in Merina and in several coastal dialects; these terms derive from the Swahili *čikiči* (for the fruit) (Southern dialects), *ičikiči* (in Ki-Gunya), or *tikiti*, *kitikiti* (from the Arabic *qettā*,

³⁶ Finger millet, a grain little known in Madagascar, was introduced from Africa at an undetermined, possibly not very ancient time. Its name in Merina, Betsileo, and Bara, *tsimpimpina*, derives from the Swahili *u/wimbi*, “finger millet, millet.”

³⁷ “A term *-lemba* is attested with the same meaning in languages of the interior (Bemba, Taabwa, and Lenje) [Zambia]; however, the possible shift from *l* to *ng* (velar nasal) is problematic” (G. Philippson, p. c.). For the Antankaraña *vohemy*, which yielded the creole term *voème*, a Malay etymology seems plausible: cf. Malay *emas*, *mas*, “weight of a grain of *Vigna radiata* (L.) Wilczek or *Phaseolus mungo* (L.) Hepper, the corresponding gold weight, which derives from Sanskrit *māṣa-*, *māṣaka*, “a kind of legume (Oṛiyā *māsa*, *Vigna radiata* [L.] Wilczek)” (cf. also Hindi *maṣa*: the Arabic *māṣ* refers to *Phaseolus mungo* [L.] Hepper). One cannot exclude *voaemba* > *vohemy*, however.

³⁸ See below. *Voamanga* or *vomanga* would later refer to the sweet potato in the Highlands. The sweet potato is a plant of American origin that was brought from East Africa during the eighteenth century.

qittā, “melon, cucumber”). The Antankaraña, Sakalava, and Betsimisaraka word *tsikiry* and the Sakalava *voantsikiry* appear to have been influenced by the Comorian language, with the second *t* of the Swahili becoming *r*.

Garlic is a plant of western Asian origin which was introduced into Madagascar via the Swahili world.³⁹ The extension of the term *tongolo*, “garlic,” shows an ancient arrival in Madagascar; *tongolo* corresponds to the Swahili *ki/tunguu*, “onion, bulb.”

Plants of Indian origin arrived via the Swahili coast, reflecting the significance of trade and cultural exchanges between the African coast and India, especially since the tenth century. Such is the case for *Vigna radiata* (L.) Wilczek, whose vernacular names *voantsoròka* (merina . . .), *vantsiròko* (northeastern Madagascar) can be connected to the Swahili *m̃oroko* (Southern Swahili), *Vigna radiata*. Flacourt (1661) gives *voand-sourouc* or *voantsourou* in Anosy during the seventeenth century. Nurse and Hinnebusch (1993) have reconstructed **mcoloko*, “cowpea” (*Vigna unguiculata*, an African plant, carried to India during the first millennium BCE) in Proto-Sabaki. If this reconstruction is correct, the name thus shifted to another *Vigna*.

The terms that refer to the pigeon pea, *Cajanus cajan* Spreng. (Fabaceae family) – *varvatte* or *ambarvatsi* (Flacourt in Anosy); *abaravatsi*, *ambaravatchi*, *ambarivatsi*, *voavate* (Froberville, for the east coast); *amberivetry* (Merina, Betsileo); *ambaravatra* (Antemoro, Tañala); and *ambàtry* (in Merina, *eranambatry* denominates the 72th part of the piaster) – can be linked either to Mwani (northern Mozambique) *mbalawazi*, *Cajanus cajan*, or to the Swahili *m̃baazi*, *m̃barazi*. As previously noted, Nurse and Hinnebusch have reconstructed **mbalazi* in Proto-Sabaki. While G. Philippon (p.c.) suggests an ancient Bantu form **mbalawali*, a Dravidian origin is also possible: one finds *avara* in Malayalam, *avarai* in Tamil, to denominate *Lablab purpureus* (L.) Sweet, which is also called *val* in Gujarati. On the East African coast, Philippon does not exclude *m-walawali* > *mbalawali*, from *-val-* or from *(a)-var-a*.⁴⁰

For the name *amberiky*, referring to *Vigna radiata* [L.] Wilczek (Merina, Sak.), I have suggested a loanword (Beaujard 2003) – which may have come directly from South India – from a Dravidian language, from terms designating *Lablab purpureus* (L.) Sweet, for example the Malayalam *avarakka*, *amarakka*. This borrowing appears to have occurred after the first millennium. K. A. Adelaar (2007) sees the Malagasy *amberiky* as a recent loanword from the Reunionese creole *ambérique* (from a Dravidian language).

Plants originating in Southeast Asia were also introduced from the East African coast, at various times: these plants include banana, taro, citron, and rice.

Throughout Madagascar, the common name for the banana tree (and for its fruit) is *akondro*; it derives from the ancient Bantu term **kondo* (Philippon and Bahuchet 1994–1995: III).⁴¹ One finds *ki/kondo*, “banana,” in ki-Ungudja, and *η/kudu*, “kind of banana”

³⁹ It is the same for henna; the name *moina*, found in the west, derives from the Swahili; it is used in a limited area and its introduction is certainly recent.

⁴⁰ In the northern Betsimisaraka region, the pigeon pea bears the name *antsòtry*, which is probably a more recent loanword from the Hindi *tor* or from Dravidian languages, perhaps via an African language: the Malayalam has *tōri* (related to the Sanskrit *tubari*).

⁴¹ Terms deriving from **kondo* refer to plantains, in the forest zone. Further south, in savannah areas, these terms, which have been borrowed more recently, refer to bananas in general (Philippon and Bahuchet

(Guthrie) in Ki-Ngazidja. Denominations of Austronesian origin have a more limited geographical use: *fontsy* (from the PMP **punti*, “bananier,” Adelaar 1995), and *ontsy* (borrowed from a Sulawesi language) are found in some places along the east Malagasy coast and along the west coast. Here we are probably dealing not with ancient terms, which the Bantu word replaced, but with Austronesian terms introduced following the arrival of the Bantu term. Along the east coast, *fontsy* often refers to the traveler’s tree, not the banana. There are two possible explanations for this shift in meaning: either the banana was not present everywhere, or – and this is the most likely hypothesis – the term *fontsy* was chosen for another plant because the word *akondro* was already predominant for the banana. Various varieties of banana bear the names *akondro fontsy* or *akondro hontsy*, possibly reflecting the older age of the term *akondro*. A variety called “black banana” belongs to the African subgroup Mlali (AA), originating in an area between Java and New Guinea, where this type of banana is no longer found (Perrier *et al.* 2009: 207). The name “black banana” refers either to the supposed antiquity of the plant, or to its rustic character.

A seeded banana of the *Musa acuminata* type called *ambihy*, “with seeds,” has been described on the northeastern coast of Madagascar, in the Lokoho valley.⁴² While its introduction is certainly “ancient,” there is no evidence that it goes back to the first arrivals. Instead, the localized character of this plant may reflect a “recent” arrival. This banana may have been known elsewhere along the east coast, however. A myth collected in the Tañala country thus mentions a “banana seed”: in this myth, the chthonic deity Mbodisy (from the Arabic Iblis, “devil”) sows a banana seed and harvests a bunch of ripe bananas on the same day (Beaujard 1991: 339, 521). The use of seeds for “remedies” may explain the importation of this wild banana. Seeds were collected and analyzed in 2013, as part of the Sealinks Project.

Other denominations for the banana exist in Madagascar, revealing influences affecting the island at various times. The north of Madagascar uses *katakata*, linked to the Swahili *kata*, “to cut” (from the Arabic *qaṭa’a*, id.). One finds the term *kida* on the west coast, which derives from an Indian language: cf. Hindi and Bengali *kela*, “banana, banana tree” (Skt. *kaḍālī*-, “banana,” see above). The name *akondro kida* for some Betsileo varieties once again appears to indicate an older age for the word *akondro*.

Flacourt describes the consumption of banana rhizome, a practice noted in insular Southeast Asia and Oceania for some clones (Burkill 1966: 1539). He also points out the use of the banana for the production of textiles, in what is now Betsileo country, and along the east coast. According to Mayeur, in 1785, “in Imerina, at the beginning of the eighteenth century, a *lamba* [textile] made of banana fibers was a present given by the king on special occasions and which only the nobles were allowed to wear” (Mayeur 1913, part 1: 160). These textiles were made from the fibers of a special species of dwarf banana, called *akondro lambo* or *sarec* (*akondro sarika*) (*sarika*: “thread, to draw banana

1994–1995). Philippson and Bahuchet suggest an original Bantu term **gòndè* (> **kòndè* > **kòndò*), corresponding to a loanword of unknown origin. R. Blench (2009) ultimately reconstructs a root **kom*, for *Ensete* sp. in West Africa: this may be the origin of **kondo*, and **kombo*, “plantain.”

⁴² “This banana was introduced very long ago; it has become subsponaneous in the lower Lokoho valley and in the valleys of a few other rivers . . . In spite of much research, it has never been found elsewhere in Madagascar” (Boiteau *et al.* 1999, 1: 94).

yarn”) (Chapelier and Hugon 1912 [1808]). Banana trees were also sources of fiber in Indo-Oceania, in particular *Musa textilis* Née, originating in the Philippines (Barrau 1965a: 67), which was present in the Highlands of Madagascar under the name *akondro lahy* (“male *akondro*”). “In 1912, only one plant of *Musa textilis* remained, at Ambohimanga” (Boiteau *et al.* 1999, 1: 80). The period of arrival of this *Musa* is difficult to identify.

This dual Asian/African influence may explain some contradictions in the symbolism of the banana in Madagascar. The ancient significance of the plant is apparent in many myths, tales, and legends, which mention the banana plantations of kings and their watchmen. As a masculine plant linked to royal power, the banana was used in rites of circumcision associated with kingship along the southeastern coast and in the Highlands, where the ritual appears to have been influenced by the circumcision feast *sambatra* of the Zafiraminia Antambahoaka (see below). In myths and tales, the banana is often a symbol of life that the hero plants before setting out on an initiation quest. Alongside the banana, the tale “Isilakolona” in the *Anganon’ny Ntaolo* (“Tales from the ancestors”) features a dog as symbol of life and auxiliary of the hero. This motif reflects an ancient significance for this animal, a cultural feature related to Indonesian influences in Madagascar (Beaujard 1991: 433–434). Unlike “Isilakolona,” a myth from southeastern Madagascar connects the banana with Mbodisy, the “god of the lower world,” an opponent of the heavenly god, and a personification of the spirits of the earth and of the autochthonous people; perhaps this is because here the banana, whose significance on the East African coast is well known, is linked to Africans and slaves (Beaujard 1991: 523).

The taro is called *saonjo*, *sonjo* (in many regions), *sahoño* (East coast; *song* has been noted in old Betsimisaraka);⁴³ all of which probably derive from East African terms (one finds *šōnga* in Ki-Pemba, *nčōnga* in Ki-Gunya, *msanga* in the Usambara), and Yemeni *zanj* and *zang*, connected by Schweinfurth with the Arabo-Persian names Zanj, Zenj, referring to the black people of the East African coast (Portères 1960: 175; Watson 1983: 68). Schweinfurth (1912), who transcribes the Arabic letter *zāy* as *s*, writes the terms *sanj* and *sang*.

In addition, the existence of the term *taho* in Madagascar has already been noted. While the ancient significance of the taro in the Highlands, on the one side, and the likely origin of the term *taho*, on the other, appear to indicate an eastern Indonesian connection, nothing demonstrates that these eastern influences – if proven – are linked to the first wave of settlement (see above). The limited geographic extension of the word *taho* matches the term’s relatively “recent” arrival.

The ancient cultural and symbolic dimension of the taro in Imerina and in the Zafimaniry country, a plant of life that is at times associated with the banana, has been noted. Taro was introduced several times into the Great Island. A variety called *saonjomanga* in Imerina may have arrived more recently from East Africa with Arabized or Swahili groups.

⁴³ The dialectal forms collected in Betsimisaraka often correspond to various spellings of the same word, *ng* denoting the velar *n* (N. Gueunier, p.c.).

Another Asian Aroid, originating in India, in Sri Lanka or on the Thai–Malay peninsula, was present in Madagascar: *Alocasia macrorhizos* (L.) G. Don. However, the Malagasy name *viha*, inherited from the PAN **biRaq*, *Alocasia* sp., is applied to *Typhonodorum lindleyanum* Schott. (Araceae family), a wild plant growing in swamps which resembles *Alocasia*. This shift in terms demonstrates that although the Austronesians arriving in Madagascar did not bring *Alocasia* with them, they knew of the plant. The Malagasy name for *Alocasia macrorhizos* is *saonjom-biha*, or *saombia*, “taro-*viha*,” a compound name which confirms the plant’s later arrival. Moreover, a variety of taro “with big ribs” bears the name *saonjokira* (*saonjo/bira*) in Imerina, which reveals a loanword from the Malay *bira*, *Alocasia macrorhizos*. The compound name *saonjokira* appears to indicate that the word *bira* arrived later than *saonjo* or other related terms in Madagascar (on *v* or *b/k*, see above).

The citron (*Citrus medica* L.), another plant of eastern Asian origin, was also introduced from East Africa. Its vernacular names (*voa*)*tremo*, *voatrimo* (Sakalava, Antemoro, Tañala), come from the Swahili *ndimu* (southern dialects, *ndrimu* in Kiamu and Kigunya), “citron, lemon,” from the Arabo-Persian *lim*, *lima* or *limū*, “citron, lemon” (a term borrowed from the Austronesian: cf. PAN **limau*, *Citrus* sp.)⁴⁴ and *limūn*, *Citrus limon* (L.) Burm.⁴⁵ Linguistic data on citrons and lemons thus allow us to trace all of the Muslim merchant networks of the Indian Ocean. The Arabs obviously contributed to the spread of *Citrus*. It is possible that the pomelo (*Citrus grandis* [L.] Osbeck) was introduced, alongside the citron, at an ancient time from the East African coast into Madagascar.⁴⁶

For rice, the names of some varieties – *vary hondry* (from the Swahili *konde*, “field planted with seasonal crops,” or *k’undi*, “husk, chaff”); *vary manga* (Anosy, seventeenth century); and *vary tsipala* on the west coast – reveal their “African” origin, as does the term *mele* given to this cereal at some places along the west coast (from the Comorian *mele*, *maele*, “paddy rice,” perhaps linked to the Tamil *nel*, “paddy”; Nurse and Hinnebusch [1993: 632] have reconstructed **maWele*, “millet, finger millet” in Proto-Sabaki). J.-C. Hébert has suggested an East African origin for the rice variety called *vary rojo*, spread throughout northern Madagascar and in the Highlands; he connects *rojo* with the Arabic *aruzz*, “riz.”⁴⁷ As mentioned, one finds the terms *rozy*, *rozo* (written *rojo* and *rojy*), *larôzy*, and *rezaly*, “rice,” in the secret Anakara language (Beaujard 1998b: 116, 117).

Conversely, the Swahili term *wali*, “cooked rice,” may indicate an Austronesian influence in East Africa, either from Madagascar or directly from insular Southeast Asia. Nurse and Hinnebusch (1993: 647), however, have reconstructed **wali* in Proto-Sabaki (< **gàdi* in Proto-Bantu), which gave rise to the terms *wali*, *wari*, and *kagari*, and they note a similarity and probable connection – in both terms and meaning – with the Indian *vari*. In addition, the rice grain serves as the basis for the weight system in

⁴⁴ R. Zorc (1994: 547) has reconstructed the term only in PMP. Curiously, J. Wolff (1994: 532) does not believe that *limau* can be reconstructed. But see Tryon 1994: 490.

⁴⁵ Forms with a final nasal, suggests Mahdi (1998: 409), may be borrowed from a language from Indochina.

⁴⁶ The general denominations of the *Citrus*, in Madagascar, are *voangy* (from *voa*, “fruit,” and *hangy*, “coral”), and *voasary* (*sary* deriving from the Sanskrit).

⁴⁷ Hébert 2000: 395–396.

Madagascar, as it does on the East African coast: the Malagasy *vary*, the weight of a rice grain, or 1/720 of a piaster, corresponds to the Swahili *wari* (in Ki-Pemba).⁴⁸

The field of genetics also reveals various introductions of *japonica* and *indica* rice (Mather *et al.* 2010), with *indica* probably coming from the East African coast from the tenth century onward. An ancient variety from northwestern Madagascar, called *kiriminy*, is a rice of the *indica* type (Le Bourdieu 1978: 47).⁴⁹ While a variety from the east coast, of the *japonica* type, is called “Java,” the antiquity of this term is unknown (Le Bourdieu 1978: 47). Genetic analysis of over 400 varieties of Malagasy rice, studied by A. de Kochko, has revealed significant variability. “Some alleles common in Africa are rare, or even absent in Madagascar; by contrast, rare alleles have been identified and found only there [in Madagascar], which suggests different origins for their introductions and particular axes of evolution” (Kochko 1988: 203). The east coast varieties, in particular the upland rice varieties, belong to the *japonica* type; other varieties along the west coast (Mahajanga region) and on Lake Alaotra belong to the *indica* type. A comparison of genetic data between Madagascar and East Africa shows that the origins are different except for the Mahajanga region, where one finds the same genotypes as in Tanzania. In the current state of research, we cannot determine whether the transfers occurred from East Africa to Madagascar or vice versa, and “the varieties may also have a common Asian origin” (Kochko 1988: 207). More recent research has confirmed the dual introduction of *japonica* rice – both the tropical and temperate types⁵⁰ – from Southeast Asia, and that of Indian *indica*, but the genetic variability is lower than in Asia: “We observed a significant decrease in genetic diversity in rice from Madagascar when compared to those in Asia, likely the result of a bottleneck on the island” (Mather *et al.* 2010: 4892, 4902). This decrease in genetic variability appears to be higher for varieties of the *indica* type – present in the north of the island and in the Highlands – than it is for tropical *japonica* rice, dominant along the Malagasy east coast (Mather *et al.* 2010: 4902–4903).⁵¹ Various *indica* appear to be genetically related to Indian varieties, “which suggests a more or less direct arrival from the Indian subcontinent” (Mather *et al.* 2010: table S1, 4893; Boivin *et al.* 2013). In addition, Mather *et al.* have pointed out “the high frequency of a unique *indica* type” (2010: table S1, 4893), and recombinations between *japonica* of the tropical type and *indica*. A set of varieties originating in the Highlands,⁵² specific to Madagascar, appears to derive from interspecific recombinations (Vaughan *et al.* 2008; Radanielina *et al.* 2012); however, the hypothesis of an introduction of some rare Asian genotypes into Madagascar cannot be excluded.

⁴⁸ Sacleux 1939: 1014, 1017; Hébert 2000.

⁴⁹ F. Le Bourdieu gives a popular, but dubious etymology (*kiry*, “small and long,” *miny*, “good”) for this name (1978: 47).

⁵⁰ Tropical *japonica* varieties collected in the Highlands for Radanielina *et al.*’s study (2012) are grown on hills, while temperate *japonica* are grown mainly on lowlands, above an altitude of 1,500 meters.

⁵¹ Radanielina *et al.* (2012: 316–317), however, write that the *indica* varieties they have collected in the Highlands “appear to be the most diverse” among the three ensembles identified. These discrepancies in results are probably due to the sampling methods used.

⁵² The varieties belonging to this group are cultivated on lowlands at altitudes of between 1,250 and 1,750 meters (Radanielina *et al.* 2012: 311).

Another plant, not cultivated but perhaps propagated, may have been imported from East Africa: this was the baobab *Adansonia digitata* L. Genetic research indicates West Africa as the area of origin for this baobab (Pocktsy *et al.* 2009). Its wide distribution is due partly to human agency, with societies using various parts of the tree for medicinal purposes and for food (fruit and grains). L. Allorge (2006) notes, however, that “Madagascar is the richest country in the world in baobabs, since it is home to seven species.”

Taken together, the data associated with African influences reveal their embeddedness in various syncretic developments. The blends from East African, Islamic, and Austronesian worlds did not result simply from inflows from the western Indian Ocean onto an ancient Malagasy background. Ongoing Austronesian arrivals between the twelfth and fourteenth centuries complicated the first patterns of hybridization. Both indianized and islamized, these newcomers were themselves the bearers of complex cultural blending.

New Austronesian Arrivals: Zavaka, Zafiraminia, and Ancestors of the Andriana of Imerina (Twelfth–Fourteenth Century?)

Researchers have long debated two different scenarios: should we envision a single arrival, or two “waves” of Austronesian settlers? Evidence suggests in fact a kind of continuum over time – with some periods of contact being more significant (Beaujard 2003). Communication between Madagascar and the Indonesian world continued, not only until – and after – the archipelago was islamized and the Śrīwijaya thalassocracy collapsed during the thirteenth century (Adelaar 1995a: 328), but up until the arrival of the Portuguese in the Indian Ocean. During the thirteenth century (marked by the incipient spread of Islam in Sumatra)⁵³ and the fourteenth century, indianized Austronesians, some of whom would become the Zavaka and Zafiraminia, arrived on the eastern coast of Madagascar. The term “Zavaka,” related to the Arabo-Persian “Zabag,” which referred to Sumatra – and more particularly to Śrīwijaya – or Java, can be seen in various toponyms along the eastern Malagasy coast (Hébert 1993–1994). Zafiraminia means “descendants of Raminia,” the group’s eponymous ancestor; etymologically, the term derives from Rāmnī, the name for northern Sumatra in texts written by Arab geographers.⁵⁴ We will see, however, that Zafiraminia culture shows a complex blend of diverse influences. Ancestors of the *andriana* aristocrats of Imerina may have reached the Bay of Antongil.⁵⁵ Using routes via the Maldives or South India, the Austronesians probably plied the entire western Indian Ocean. In a chapter devoted to the city of Zafār (in Dhofar), Ibn Battūta gives the term *athwāk* for a

⁵³ In the absence of archaeological evidence, the suggested thirteenth-century dating for the migration of the Raminia people remains hypothetical. In addition, it seems difficult to consider the Raminia as an “ethnic group.” See below.

⁵⁴ Ottino 1986: 48; Ferrand 1907: 443–444. Mas’ūdi (tenth century) mentions “ar-Rāmyr” (Ferrand 1907: 437). Rāmnī and Lāmūrī refer to the same region. Rāmnī is also used at times to designate the entire island of Sumatra.

⁵⁵ “Ancestors,” but not “all of the ancestors” (see below). While the Austronesians arriving on the east coast did play a role in the formation of the Merina *andriana* group, the *andriana* also integrated elements from the ancient aristocracies of the Highlands as well as Arabo-African cultural influences.

“honey” obtained from sap drawn from the petiole of the inflorescence of the coconut palm. This name, also known in Sri Lanka, is related to the Malay *tuak*, “palm wine” (the Malagasy say *toaka*, “rum”). This “honey,” writes Ibn Battūta, is bought by “merchants from India, Yemen, and China” (1982, 11: 103). Because his account also mentions the Maldives, we do not know if the word *athwāk* was encountered in Zafār or in the Maldives, where Ibn Battūta sojourned for a long period. Earlier, Ibn al-Baytār (1197–1248) had already given *aṭurwāq* as the name for the milky liquid of the coconut.

The Zafiraminia and Their Legacy

According to Arabico-Malagasy manuscript MP 26 (National Library, Paris), which relates a Zafiraminia tradition written during the nineteenth century, Raminia, the legendary ancestor from Arabia (a man, according to this tradition) “went into exile in Mahory [Mayotte], accompanied by the Mofia, the Masihanaky, the Tevandriky, the Ivalalañampy oxen, and the Itatakorovy oxen”; Raminia arrived at Haraña (either at Vohemar, or a place located near Foulpointe, south of the Bay of Antongil), and moved southward to the mouth of the Ivondro River, where he left a large jar at a place called Ambodisiny (“At the foot of the jar”) (Dez and Viré 1982, fs. 8 and 26–27: 26, and 56–58). From there, Raminia continued southward to Ialamanofy (15 miles away from the Mangoro River, according to Flacourt). Then Raminia departed for countries abroad, later returning to the mouth of the Sakaleona River, where he left a chlorite-schist statue of an animal; this statue is called *vatolambo*, or *vatosarilambo*, “stone in the likeness of a boar,” or “stone in the likeness of an ox” (if we refer to the etymology of *lambo*) (Dez and Viré 1982, f. 29: 62). Some researchers have argued that this statue may depict an elephant or a tapir (others propose a dwarf hippo, or some mythical animal).⁵⁶ One might think also of a rhinoceros. Weathering of the stone makes any interpretation uncertain. Today this statue is kept as a relic by the Antambahoaka village of Ambohitsara, located near the mouth of the Fanantara River (various Antambahoaka groups claim Zafiraminia ancestry).

The original purpose of this statue, which is partially hollow, is unknown. An enthusiastic traveler, D. Metjen, has recently put forward an interesting, but problematic interpretation. According to Metjen, the statue indeed depicts a boar, similar to ancient Chinese pieces; the cavities on its back were most likely closed by lids bearing zoomorphic figures. Ritual libations were poured into the statue, which could be emptied through another, lateral hole.⁵⁷ While Metjen argues that the statue was imported, however, it was in fact probably carved in local chlorite schist from the Fanantara region (Vérin 1975a: 910). Rather than proposing direct ancient Chinese

⁵⁶ Vérin 1975a: 905; Ferrand 1893: 13. L. Molet and E. Vernier (1956) have suggested that the statue features the Sumatranese elephant (*Elephas maximus sumatranus*). For a description of this statue, see Molet and Vernier 1956: 269–276. G. Ferrand (1891: 137), whom J. Faublée has quoted, sees the image of a tapir. While the ears recall a rhinoceros (Javan rhino), there is no horn carved on the front of the head.

⁵⁷ This interpretation raises further questions. While the Chinese of the Song period did produce bronze or ceramic replicas of ancient pieces, they do not appear to have used them in rituals. It is not possible to accept Metjen’s theory of an ancient Chinese origin and an arrival of the statue on the Malagasy coast around the fifth century (D. Metjen, manuscript, Musée d’Art et d’Archéologie, Antananarivo).

influences, it might be more relevant to connect this statue to Indonesian objects – influenced by China – which were used to hold liquids (see Illustration xxvi). It was common practice in China during the Song period to make copies of ancient Chinese vessels. The statue may in fact reflect the influence of Indonesians of Chinese origin.

A Zafiraminia branch left this southeastern region at the end of the fifteenth century, following the arrival of other Muslims in the Matatàña valley,⁵⁸ and settled in Anosy, where the Portuguese and later the French met them during the sixteenth and seventeenth centuries. The king “Bruto Chambanga” told Luis Mariano that “his ancestors, originating in Mangalor and Meca [Mecca], lost their way after leaving India aboard one or several ships; then they reached the northern tip of the island. Later, because of increasing population, they sailed down as far as the southern tip of the island . . . and all along the eastern coast, there are men of his race” (*COACM*, 11: 49). According to a narrative reported by Flacourt, the ancestor “Ramini” “left with his wife for a land in the east called Mangadsini or Mangaroro”; the account later mentions “Mangelor or Mangaroro,” which A. Grandidier has linked with the Indian city of Mangalore, and G. Ferrand to northern Sumatra (Flacourt, ed. Allibert 2007: 147). One finds the spelling “Manjaroro” in Arab texts for the city of Mangalore. For Mangadsini, Hébert has suggested a likely Swahili etymology Manga/dji/ni, “city of the Manga,” with Manga referring to Arabs.

Some traditions of ancient Antanosy culture have led P. Ottino to start by suggesting an Indian origin for the Zafiraminia. He notes that in order to justify hierarchies within the kingdom, the *roandrian* (aristocrats of the highest rank) told Flacourt a “fable” which was a transposition of an Indian myth from the *Rig Veda* on the slaughtering of the Primordial Man Puruṣa: God [Zañahary] drew women from the various parts of Adam’s body, from whom a number of different Antanosy statutory groups are descended (Ottino 1973: 72). Among other Indian features, Ottino points out the use of the palanquin, and the fact that the members of different statutory groups took their meals separately, which reflects the significance of the opposition between purity and impurity. Ottino ends by ascribing a Sumatranese origin to the Zafiraminia, pointing out that the Indian cultural features contained in their traditions reflect the Indo-Muslim legacy this group carries. Various elements of the kingships of southeastern Madagascar – and of Imerina – express Maritime Southeast Asian conceptions marked by an “Indo-Muslim blend” elaborated in Indonesia and introduced into Madagascar after the twelfth century (Ottino 1986).

The Muslim synthesis observed in Anosy during the seventeenth century was further deepened by the fact that the Zafiraminia Flacourt met had incorporated part of the knowledge of the Antemoro healer-diviners, with whom they were in contact: they knew Arabic script and the Antemoro lunisolar calendar, and owned Arabico-Malagasy manuscripts with magico-religious content. On the other hand, the introduction of geomantic concepts seems to have occurred prior to the Antemoro influence. Their music reflects an “Arabic” influence which is difficult to date: Flacourt describes dancer-singers called *sairy*

⁵⁸ These newcomers would form the aristocracy of the Antemoro kingdom (see below).

(from Arabic *šā'ir*, “poet”), and sung epics accompanied by a single-stringed fiddle of Arabian origin, called *herravou* (from the Arabic *ar-rabāb*).⁵⁹

Unlike Antemoro traditions, however, Zafiraminia legends appear to be marked by extremist Shiite ideas. Muhammad prostrates himself before the “Prophet” Ramini, “who was born from sea foam which was animated by a spark of celestial fire,” and gives Ramini his daughter Fāṭima in marriage (Leguével de Lacombe 1840, 11: 180). The symbolism of the union of celestial light with water is commonly found in Malagasy myths of sovereignty which Ottino terms “the cycle of Andriambahoaka” as well as in the Malay myths studied by J. J. Ras, which exhibit the same blend of Indian and Muslim influences as the Malagasy traditions.⁶⁰ In the *Hikayat Banjar*, Al-Khidr, “The Green One,” marries a goddess who is the daughter of the Ganges, and Iskandar, the mythical figure of Alexander the Great, marries Viṣṇu’s daughter. The children born of these two couples (a foam princess and a sun prince) marry each other. The prince who would be born from this marriage would take as spouse a woman descended from a bamboo. This myth expresses the union of the three worlds (heaven and water, and earth), which is at the center of Malagasy myths of sovereignty (Ottino 1986; Beaujard 1991: 410ff.).

The terms associated with royal power also reflect Indonesian influences. *Sombily*, the term for “the ritual slaughtering of an animal,” was the privilege of nobles in Anosy during the seventeenth century, in the Antemoro kingdom until the nineteenth century, and among the Tañala of Ikongo. It derives from the Malay *sembelih*, a corruption of the Arabic *Bismillah*, “In the name of God,” a formula uttered before ritually killing an animal (Dahl, however, supports another Arabic etymology, from *sabbil*, “consecration of an object for a pious use”).⁶¹ The etymologies of royal titles appear to be Austronesian. Flacourt refers to princes using the terms *roandrian*, *anria*, *dian*, which can be related to the Javanese *raden* (**ra/adi/an*), a title given to people belonging to the royal family; to the Bugis *andi*, a title preceding the royal and aristocratic names; and to the Old Malay *haji*, “king.” These terms derive from the PMP **qa(n)Zi* (Adelaar 1995). The Malagasy forms *anria*, *andria(na)* are regular derivations from **qa(n)Zi*. By contrast, *dian* may be a loanword from the Javanese (as well as the *ro-* in *roandrian*). Northeastern Madagascar has *andiana*, *andianaña*, with the meaning of “rich man” (in societies without kings). The name “Rahadzi,” ancestor of the Zafiraminia and Racoube’s brother in the account reported by Flacourt, may be connected to the Old Malay *haji* (see Ferrand 1987: 118) (in the case of a loanword from the Malay language, the PAN **Z* became *j* or *z* in the Malagasy language). However, this name may also come from the Arabic *ḥājj*, the honorific title given to people who have accomplished the pilgrimage to Mecca. Moreover, the Malay language has the term

⁵⁹ Sachs 1938: 68. On *herravou*, see Flacourt, ed. Allibert 1995a: 156.

⁶⁰ Ras 1968; Ottino 1986: 29. Ottino has given the title “cycle of the Andriambahoaka” to a coherent set of Malagasy sovereignty myths that he has related to Indonesian myths, and more specifically to Malay texts such as the *Sejarah Melayu* and the *Hikayat Banjar*. Andriambahoaka (“Lord of the People”) was the name given to the king in some sovereignty myths from the Malagasy Highlands and the coasts; Andriambahoaka was also the royal title in use in southeastern Madagascar, in ancient times.

⁶¹ Dahl 1991: 19. According to Dahl, the Malay word *sembelih* and the Malagasy word *sombily* developed independently of each other. Dahl does not explain the *o* in *sombily*, which may reflect a Javanese pronunciation.

adi, “noble,” loaned from the Javanese. Father Luis Mariano also gives the word “Bruto” as an Antanosy royal title, a word that – as Ottino suggests – may derive (with a Javanese pronunciation and a metathesis) from the Sanskrit *batara*, the title of Javanese rulers of the Mojopahit kingdom, which appeared during the second half of the thirteenth century.⁶² The title *batara* was also known on Sumatra.

Zaframinia symbols of power also reflect an insular Southeast Asian origin. The house of the king has horns topped by wooden birds on its roof; these refer to the “identity” of the king, the bull, the “great house,” and the kingdom. The *antsiva* conch forms part of the ritual objects. As an attribute of Viṣṇu, in Hinduism, the conch was associated with kingship in the Indian and Insulindian domains. The term *antsiva*, by contrast, is of Bantu origin.

The new Austronesian arrivals reintroduced the Malay term *lembu/lambu* with its original meaning of “ox”: in Tañala, the royal relics of the Zaframbo clan in the Sandrañanta valley are called *lambohamba*, a word that can certainly not be translated as “twin (*hamba*) boars (*lambo*),” since the Zaframbo have the pig taboo. I have also noted the proverb *Vala vakoka tsy mahatan-dambo* in Tañala, “A cattle pen made of *vakoka* wood is unable to hold zebus” (Beaujard 1998a: 453). Among the Antemoro, in the islamized Anakara group, for whom the pig and the boar are both taboo, I have noticed the expression *andohandambo*, “at the head of the ox,” for the arch of honor erected near “the great house” where a political chief – called *randriambe* (“great noble”) – had been officially installed. Among the Zafimaniry, *loha lambo* refers to the “top” of the house. While M. Bloch translates “head of the boar,” *lambo* may mean “zebu.”⁶³ The name of King Ralambo, Andriamanelo’s son according to the *History of the Kings* of Imerina, and the king credited with inventing the Feast of the Bath (New Year festival), should probably be translated as “venerable ox” instead of “venerable boar.” Tradition tells us it was from this king onward that the consumption of ox meat, previously forbidden, was authorized (Callet 1981: 145). In fact, archaeology reveals the consumption of zebus well prior to Ralambo. Moreover, the dugong is called *lamboara*, “cow of the corals” (?), and *lambondriake*, “sea cow.” While these examples probably fail to express the retention of the original meaning of the word *lambo* over the centuries, as I had previously thought and as Adelaar argues (2016), they do reflect a more recent reintroduction of the term *lembu/lambu* from the Malay world. This is an important point for the history of cultivated plants.

The zebu, originally from India, arrived in Madagascar from Africa. The newly arrived Indonesians turned to this animal for the sacrificial rituals they had practiced in insular Southeast Asia. One such ritual (*sorona*, in southeastern Madagascar, from the PAN **surun*, “push forward” [Blust 1972b]), linked to the figure of the king, was a crucial contribution on the part of the new Indonesian migrants, and is still practiced today. Nobles hold the privilege of carrying out the sacrifice; this would appear to be linked to the idea that the cosmos results from the immolation of the Supreme Sovereign. Each ceremony, in which the god-king (represented by the bull to be immolated) offers himself up for sacrifice, re-enacts the creation of the universe,

⁶² Ottino 1986: 6. Cauche gives the word “Brote” (*COACM*, VII: 41).

⁶³ However, D. Coulaud (1973: 140) has noted pig sacrifices among the Zafimaniry.

through the offerings presented and the blood that is sprinkled at the end of the ceremony. The ritual is structured in “threes:” there are three stages in the invocation and three portions of food, and three substances are offered, symbolizing the three worlds of the universe (rice=heaven, zebu meat=water, mead=lower world).⁶⁴ Among the Tañala, princesses and first of all the “heavenly princess,” usually “the first spouse” of the king, hold the honor of eating a portion of the offerings prepared prior to the ancestors’ invocation. This privilege harkens back to the origin myth of rice and kingship, linked to myths of Maritime Southeast Asia.⁶⁵

Moreover, P. Ottino links the Zafiraminia with the introduction of circumcision into the southeast. I have similarly interpreted Antambahoaka and Tañala legends relating to *tona* eels: these seem to oppose the old clans of the eastern coast with both circumcision and the Zafiraminia nobility (Beaujard 1991: 544). The meat of this eel is an absolute taboo for the Zafiraminia (I have noted that among some autochthonous Malagasy groups of the eastern coast, *tona* eels are believed to house the souls of former chiefs,⁶⁶ a concept that is probably Austronesian in origin).⁶⁷ Linked to kingship in Imerina and the southeast, circumcision appears to have been strongly marked by Zafiraminia influences (Ottino 1973: 73). For this ceremony, “men having their father and mother alive” collected sacred water (*rano masina*, which also means “salted water”) and “lighted, shining water” (*rano manoro*, from the Arabic *nūr*, “light”) in a whirlpool at the mouth of a river or at a confluence of rivers (in Imerina, however, the sacred water used for the circumcision was collected in a sacred lake, a rite connected to the immersion of the liquids from rulers’ corpses in that lake). One sees here a union of water with light (a characteristic of kings) that is noted in Ramini(a)’s legend of origin and in the Malagasy “cycle of the Andriambahoaka,” as well as in Malay and Indonesian chronicles influenced by Islam. Here, water and light are associated with salt. Ottino has related this triple alliance to the Fāṭima of Shii Islam, whose name is found in a Bara-Tañala version of the myth of the Mermaid (1986: 532ff.). In addition to Islamic influences, the ceremony appears to be filled with symbolism which is partly “Indonesian” (spatial symbolism; symbolism of the plants featured in the ceremony; and the group’s sense of communion with its ancestors).⁶⁸

The whirlpool at a river’s mouth, or at its confluence with another stream, where holy water is drawn for circumcision rituals, represents a passage between worlds. This whirlpool symbolizes the center of the universe, where waters merge, and rotate

⁶⁴ In addition, twelve chunks are cut from the sacrificed animal, when preparing the offerings; twelve expresses totality, and has cosmic reference. The ritual cutting of twelve chunks from the sacrificed animal is also observed on Mayotte (Blanchy 1997: 120).

⁶⁵ See Beaujard 1991: 401ff. On the *soro(na)*, see Beaujard 1995: 188–191.

⁶⁶ See Delord 1957: 117 for the Betsimisaraka of the Manandra River valley. *Tona* derives from the PMP **tuNa*[], “eel” (Dyen 1965).

⁶⁷ Hamonic (1988: 9) mentions offerings to eels among the Bugis.

⁶⁸ The name for the circumcision ritual in the southeast, *sambatra* or *savatra*, appears to be borrowed from the Malay form *sawar* (see also Ngaju *sawar*, “to sow rice in holes, in slash-and-burn cultivation). In Sundanese, *sawer* means “action of throwing rice, or coins, during a marriage ceremony or a circumcision; it is also the name of the ceremony itself. This etymology is surely connected with the etymologies of the term *sombily* and of titles of nobility (see above).

clockwise, following the movement of cosmic order, and creating foam. The cosmic dimension of the whirlpool at the river's mouth, a place of fertilization and procreation, is clearly seen in the Malay chronicle *Hikayat Banjar* from Kalimantan, in an episode previously mentioned here. In this tale, a mass of foam arises from a whirlpool, "as high as a royal parasol"; from this foam, a princess is born who will marry a prince who "has appeared" from the Sun, at the court of Mojopahit (Java).⁶⁹ Here, once again, we find the union between foam and "celestial fire" which presides at Ramini(a)'s birth.

Beliefs related to eclipses of the moon express the same Indo-Indonesian syncretisms. Like the Malays, the Antanosy made as much noise as possible during eclipses of the moon or sun; this was to scare away the dragon Rao (cf. the Indian *asura* Rahu) when it attempted to swallow either planet or star: "The Antanosy told D'Almeida that this serpent was below the earth, but was much larger than the earth since it bore the earth on its head."⁷⁰ According to western Indonesian beliefs, a *naga* supports the earth; this *naga* is linked to the god of the underworld, who fights with the sky.⁷¹ The expression "moon eaten by Rao" referring to an eclipse is found in Indonesia. Allibert (1984: 200) has observed people making a great deal of noise during an eclipse in Mayotte, and in northwestern Madagascar, J. S. Leigh had signaled a similar practice in 1838 in the Bay of Ampasindava (Allibert 1991: 54). The "Indian" myth of a demon attempting to swallow the moon is known throughout the Muslim world: "From Iran to Morocco there is a myth . . . telling that a sea monster or a dragon eats the moon at a certain time" (Rodinson 1962: 199). This myth was either introduced very early on in insular Southeast Asia, or reflects a parallel story.

C. Allibert (1995a: 64) has put forward a different interpretation for the Islamic elements in Zafiraminia culture: he sees them as influences of Austronesians who converted to Islam in Arabia. One example was the Sayābiga (see above), mentioned by Balāduri (according to Allibert and Vérin, the working of chlorite schist supports the idea of these Austronesians' passage via the Persian Gulf en route to Madagascar).

Other traditions reveal diverse cultural inflows: according to "Laurent d'Anania, at the end of the sixteenth century, the name Torombaia was given [to Fort-Dauphin] because of a ship captain from Java who died there." In 1650, Nacquart indicates that "the ancestors of the Zafind-Raminia came from Persia five hundred years ago," and according to Carpeau du Saussay, "the Whites came from Mozambique a long time ago, whence they were expelled by the tyrant of Quiloe."⁷² These contradictory texts may reflect confusions among the traditions of various groups, and may also result from the complex origins and syncretisms involved.

Should we attribute all India-related traditions noted along the eastern Malagasy coast to the "Indo-Muslim legacy" of the Zafiraminia? In fact, migrants from India had been present in the western Indian Ocean for centuries; Indians had probably arrived in the main Malagasy trading ports. According to Barros, Diego Lopes de Sequeira, who

⁶⁹ They are the ancestors of Raden Samudra; he converted to Islam, and became Sultan of Banjar (Ottino 1986: 197ff.).

⁷⁰ R. P. D'Almeida, *COACM*, x1: 193, quoted by Hébert 1965a: 98.

⁷¹ For example, among the Batak Toba, the Ngaju, and the Niassians (Stöhr 1968: 177).

⁷² Grandidier 1892: 108 n. 2; also *COACM*, 1: 434; Allibert 1995a: 52.

reached a place called “Turubaya”⁷³ (Fort-Dauphin, which Flacourt refers to as “Androbeizaha”) in 1508, revealed that this name was that of “a captain from Gudjarat, whose vessel had been shipwrecked there in ancient times. All the inhabitants of this region descend from the sailors of this ship, according to the account they gave Diego Lopes” (*COACM*, 1: 47). While we do not know if the text here refers to the Voajiry or to the Zafiraminia, it suggests the possibility that the latter were already present in Anosy in 1508. One fact is certain: companions of Lopes de Sequeira met a few men from Cambay along the southeastern coast; these were the “survivors of a shipwreck whilst on the way to Sofala some thirty years before” (*COACM*, 1: 50; Axelson 1969: 106; see below). According to their traditions, on arriving in Anosy, the Zafiraminia found that a group called “Voadziri” (from the Arabo-Persian and Hindi term *wazir*, “vizier”) had settled there and was ruling the country.⁷⁴ In the Zafiraminia kingdom described by Flacourt, these “Voadziri” stood at the pinnacle of the “black” hierarchy; they “ruled a region [of Anosy]” and “had the power to cut the throats of animals when they were far from the Whites” (Flacourt, ed. Allibert 1995a: 117). This “White/Black” division, encompassing an opposition between the islamized people (*silamo*) and nonbelievers (*kafiry*), is also found in the Comoros and in East Africa (Chanudet 2001: 200). The term *voaziry* is used in proper names in the Antemoro country. In fact, there is no ready evidence that the Voajiry of the Anosy region were descendants from Indians. At Kilwa, at the end of the fifteenth century, a family grouping called the “House of the Wazirs” held important posts alongside the sultan (Oliver and Mathew 1963: 123). In Mayotte, the word *waziri* refers to the autochthonous “black” chiefs, who were conquered by the founders of the sultanate, who had come from the Swahili coast. As “masters of the earth,” these *waziri* were associated with the enthronement rituals of kings. In one founding myth on Mayotte, a Muslim called Amadi Sharif (a descendant of the Prophet) arrived from the Swahili coast accompanied by his *waziri*, a simple African commoner.⁷⁵

Lopes de Sequeira has described a “very old house made of stone and lime” which may be the “stone house” *traño vato* located near Fort-Dauphin, whose construction would later be attributed to the Portuguese. This house may have been built by a population who lived in the region prior to the Zafiraminia. The same author writes this about the people of Turubaya:

These men have a whiter complexion than those of the continent . . . They say that they came from another country to settle there, and they have maintained their race. On this land they

⁷³ Turubaya may derive from two Sanskrit terms: *tārā-* (which may have been pronounced *toro* in Javanese), “who carries on the other side,” and *bāhiya-*, “external” (Pali: *bāhiya-*, “foreign”). This interpretation remains hypothetical. Castanheda writes “Turouya.”

⁷⁴ Oral Antanosy traditions mention short men, the Kimosy, as the “earliest inhabitants,” “masters of the earth”; Flacourt gives the Kimosy as inhabitants of a region located between Arindrano (southern Betsileo) and Anosy. As J.-A. Rakotoarisoa notes (1998: 78), beliefs related to the Kimosy are quite similar to those found in the Highlands concerning the Vazimba; these beliefs are influenced by the East African coast. See also Rakotoarisoa 1998: 74.

⁷⁵ Blanchy 1997: 115–116. Amadi Sharif married a princess who lived at Tsingoni; she had also come from the East African coast. They were the parents of the first chief *beja*, who held the title *mfaume* (king).

have Moorish books illuminated in gold; however, nobody is able to read them. There is also a large book of records of all things that men can own or think of – I have had knowledge of this only after I left [this region] – and a few porcelains which date back to the same time and 4 or 5 threads of banners [?] kept from the same period. They believe in Muhammad and his doctrine, but their faith is so superficial [that it might be possible to convert them] to Christianity.⁷⁶

The king whom Lopes de Sequeira met was named Diamō Germas (*dianoñy* Garamaso, “Lord with light-colored eyes”). The royal title *andrianoñy*, “lord [*andri-ana*] of the river [*oñy*],” was later used by the Antemoro and Tañala kings. This may indicate that the aristocrats met by Lopes de Sequeira were Zafiraminia. However, we cannot exclude a simple borrowing of the terms *andriana* and *andrianoñy* by the Zafiraminia from other groups previously settled in southeastern Madagascar.⁷⁷

This testimony validates the existence of written texts probably using Arabic characters in the Anosy kingdom at the beginning of the sixteenth century. These texts were not necessarily brought from Sumatra by ancestors of the Zafiraminia. Adelaar, however, has suggested a Javanese or Malay origin for the Arabic Antemoro script. The Antemoro succeeded the Zafiraminia in the region of the Matatāña River.

Ramini(a) may have traveled via southwestern India (Shepherd 1982: 139). Indonesians were present along the coasts of Bengal and Malabar, and at Cambay. Barbosa has described their activity in coastal trade at the start of the sixteenth century (Ottino 1974b: 9). The Srīwijayan grip on Sri Lanka during certain periods has already been mentioned. At the beginning of the thirteenth century, “Jāvaka” (perhaps Malay) were mentioned in Sri Lanka (see above); a Malaysian king, a vassal of Srīwijaya, sought unsuccessfully to control Sri Lanka, on two occasions. The Chinese chronicle by Zhao Rugua includes Sri Lanka among the conquests of Sanfoqi (Srīwijaya). Indonesians had been present on this island and on the South Indian coasts since ancient times. The Malagasy term *zavaka* may have come directly from the Indian name Jāvaka (see below). As mentioned, Idrīsī described a trade route linking the coast of Sofala, the Comoros (and Madagascar) and India.

Zavaka and Zafiraminia

In the story of the Zafiraminia as reported by Flacourt, Prince Racoube, Ramini’s grandson, arrived in Comoro (the Comoros), and later sailed to Madagascar, to the mouth of the “Harengazavac” River, “two miles from Mananzari” (Rangazavaka is now the name of a lake located between Nosy Varika and Mananjary) (ed. Allibert 1995a: 147–148). Hébert (1993) breaks this name down into two components: *haraña* (“rock, reef”) and *zavaca* [*zavaka*], a term he relates to “Zabag” (Sumatra or Java, in Arabic texts, and in Sanskrit and Prākṛit texts, “Jāvaka”),⁷⁸ on the one hand, and to *vazaha*

⁷⁶ Hébert 1996a. Also quoted by Allibert (1995b: 483), after Axelson 1940. The translation of *algonfar* in the Portuguese text as “banner” is a misinterpretation. *Algonfar* certainly derives from the Arabic *gifāra*, “cloth covering the head.”

⁷⁷ Note that the Cham language had two homonyms *klaung*, the first signifying “king” (cf. Old Khmer and probably Old Cham *kurung*, *krung*), and the second denoting “river” (Ferrand, March–April 1919: 313).

⁷⁸ According to J. Gonda (1973: 348), *javwa* may have been an Austronesian term meaning “indigenous, Indonesian.” The Arabs applied this term either to the kingdom of Srīwijaya from the seventh century

(“foreigner” in Malagasy) on the other; *vazaha* may also derive from Prākṛit Jāvaka, with a metathesis).⁷⁹ During the eighteenth century, on the West coast of Madagascar, Drury has noted the term *vazaka* meaning “foreigner” (Hébert 1993).

While Zaframinia concepts and the meaning of *zavaka* indicate an Indonesian origin for some migrants, the term “Zavaka” may also refer to earlier arrivals on the eastern Malagasy coast. Various toponyms linked to the Zabag have been noted along the east coast. The 1653 Flacourt map shows a Haragazavac and a Haraghazavac: one north of Mananjary, and the other near the Bay of Sainte-Luce, north of Fort-Dauphin. Hébert signals yet another Harangazavaka near Toamasina, opposite the Ile aux Prunes (Plum Island). He also notes Rangazavaka, Iharambazaha (which is described in the Antemoro manuscripts as the first harbor reached by Ramakararo, ancestor to the Anteoñy Antemoro, on the east coast, see below), and Tsiranambazaha (mentioned by Mayeur in the Vohemary region, which corresponds to the “Sirambasaha” described by the Englishman Leigh). To this list we may add Nosimbazaha Island, where Vernier has signaled an ancient cemetery (it is an islet off Cape Masoala) (Vérin 1975a: 878). A summit in the region of Lake Alaotra bears the name “Vohibazaha” (Molet 1957). Hébert suggests that the Zavaka surely engaged in the iron trade. He relates these Zavaka to the Zafimbazaha clan, a people inhabiting eastern Imerina. Oral traditions assert that this clan introduced iron metallurgy to the Malagasy Highlands (Radimilahy 1988: 164). Moreover, a group called “Antambazavaka” lived in the Mitsio archipelago (northwestern Madagascar) (from Anta, “people,” a term of Austronesian origin; *va-*, *id.* [Bantu term]; and *zavaka*) (Hébert 1993: 25). Note that group names and toponyms refer primarily to the east coast, and, to a lesser extent, to the northwest and the Highlands of Madagascar. This distribution gives us clues to the areas reached by the Zavaka, and appears to correspond to direct routes running through the Maldives.

Terms related to the names for winds and directions mirror influences from Sumatra, but cannot be linked specifically to the Zaframinia. For example, two terms referring to winds, employed on the east coast, *tsimilaotra*, “northeast wind,”⁸⁰ and *varatraza*, “southeasterly trade winds” (“south wind” among the North Betsimisaraka; on the west coast, *varatsaza*: “northeast wind,” or “southeast wind, land breeze”), correspond to loanwords from Malay (cf. *timur laut*, “northeast,” and *barat daya*, “southwest”).⁸¹ The Malay *timur* derives from the PAN **qaCimuR*, “southeast monsoon wind” (Adelaar

onward, or to the islands of Sumatra and Java. Some confusion arose with regard to the term “Yavadvipa,” an ancient Indian denomination for these islands, from the Sanskrit *yava-*, “millet.”

⁷⁹ Moreover, *vaniyaga*, an old Malay and Javanese term of Indian origin, means “trader,” but the disappearance of the nasal is difficult to explain in the case of a borrowing. A derivation from the Malay *bajak*, “pirate,” that I have suggested (Beaujard 1991: 8 n. 7), has been rightly criticized by O. C. Dahl and A. Adelaar. Various comparisons with Bantu terms (Wazanga, “white foreigner”) and Swahili terms (*jaba*, “dignity” [from the Arabic], or *jaba*, “north”), ought to be rejected as well.

⁸⁰ Hébert 1968a: 167, 171. Flacourt has given *simoulots*, “northeasterly wind,” in opposition to *talabots*, “southwesterly wind or sea breeze.”

⁸¹ In the ancient Malay system, considered by Adelaar as being formed on the Sumatranese coast corresponding to Sṛīwijaya, *laut* (“sea”) referred to the north, and *daya* (“inland”) indicated the south.

1989b), from which the Malagasy may have inherited⁸² the word *atsimo*, “south” (cf. also Makassar *timboro*, “south”; Tagalog *timog*, “south”; in other languages, such as Malay, the term refers to the east or to the east wind). The Malay *barat*, “west,” derives from the PAN **qabaRat*, “northwest monsoon wind” (Adelaar 1989b). The Malagasy language contains borrowed terms: *avaratra*, “north,” *varatra*, “thunder” (loanwords from South Sumatran Malay), and *vara*, “whirlwind, tornado” (Tañala dialect), possibly a loanword from a language from Sulawesi, cf. Makassar *wara*, “north.” Dahl (1991: 104) has argued that *avaratra* and *atsimo* may have been borrowed from an Orang Laut language (where **R > r* and **-R > -ə*).

Adelaar has already noted that *tsimilaotra* and *varatraza* do not undergo the same 90° shift as *avaratra* and *atsimo* when compared to Malay (1989b: 10). These terms may have been borrowed long ago. This holds at least for *varatraza*, but since the two words function as a unit, it is likely that they were borrowed at the same time.⁸³ Although Adelaar has not done so, it is tempting to infer that *avaratra*, on the one hand, and *tsimilaotra* and *varatraza* on the other, were not borrowed at the same time. *Tsimilaotra* and *varatraza* may have been introduced into Madagascar by people using the Malay system. As Hébert has previously noted: “The introduction [of *tsimilaotra* and *varatraza*] appears to have resulted from a second wave of migrants from Sumatra, on the east coast” (1968a: 195). In addition, the name *sagary*, “northeast wind” found in northern Madagascar, derives from Sanskrit *segara*, “ocean,” via a Malay intermediary. This term does not show the transformation *g > h* which results from “[a former] contact stage with Bantu” (Adelaar 2007). *Sagary*, thus, appears to be a more recent introduction.

Links between the Zaframinia and the *Andriana* Ancestors of the Merina Kings

The thirteenth-century dating usually suggested for the migration of the Zaframinia rests upon tradition as reported by Mariano: in 1614, the Zaframinia king, in Anosy, “Bruto Chambanga” or “Dian Tsiamban” counted “in direct line, seventeen generations on the one side [male line], and fourteen on the other [female line]” since the arrival of his ancestors in Madagascar. This provides a rather fragile basis on which to propose a dating. During the seventeenth century, Flacourt noted that the Zaframinia arrived in Madagascar “five hundred years ago” (ed. Allibert 1995a: 96). Moreover, a Zafimamy tradition (Imerina) recounts the arrival of the ancestor of the Merina *andriana*, whose name was Andriantomara, on the northeastern coast, near Maroantsetra, at a time which may “have gone back to the first third of the thirteenth

⁸² *Atsimo* may also be a loanword, for example from a language of South Sulawesi, a position advocated by Adelaar (1995a: 348–349).

⁸³ In the northern Betsimisaraka dialect, as in Malay, the two terms are in opposition (north/south and northeast/southwest, respectively). However, on the Malagasy map, the two terms do not quite overlap: *varatraza* is absent in central south, southeastern, and southern Madagascar, and *tsimilaotra* is not employed in the southwest (Hébert 1968a: 202–203).

century” (Délivré 1974: 233–234).⁸⁴ The *andriana* may have been present in the east-southeast of Imerina during the first third of the fourteenth century. The marked “Indonesian” features noted among the Northern Betsimisaraka are likely to result, in part, from the influence of new Austronesian arrivals, and not from a “conservatism” unique to this region.⁸⁵ The routes followed by these *andriana* toward the Highlands remain poorly documented archaeologically; the diffuse nature of infiltrations from the coast may explain this absence of evidence. The site at Vohidrazaña, mentioned in the Zafimamy tradition, where excavations have been undertaken, may have served as a landmark on routes from the east coast to the Highlands (see above). As R. Blench notes (2008), the presence of malaria from *Plasmodium falciparum* along the coast most certainly encouraged the new Indonesian migrants to settle in the Highlands.

According to Zafiraminia tradition as reported by Flacourt, Racoube, fleeing his elder brother Rahadzi,⁸⁶ “went up along the Mananzari River” toward the Tañala country and southern Betsileo, where he died (Flacourt, ed. Allibert 2007: 158). The Arabico-Malagasy manuscript MP 26 gives another version: “Andriandrakova said: ‘I will go to look for . . .’. And then she left for Imerina . . . She took water, in fifteen gourds . . . and she arrived at the Ikopa [River]. She asked the Vazimba: ‘How many moons to [reach] the sea? – Two moons,’ they said. – ‘I am Andriandrakova,’ she said. And then she married a Vazimba, and gave birth to Andriambahoaky.”⁸⁷

It is obvious that the names Zafiraminia traditions give to the ancestor who walked up into the Highlands, “Racoube” (in Betsileo country) and “Andriandrakova” (in Imerina), are each linked to the word *hova*. From the seventeenth to the nineteenth century, Imerina was known as Ankova, and its inhabitants were the *hova*, terms that the first French texts transcribe as “Ancôve” and “Houves.” The name “kingdom of the *hova*” – mentioned by the northwestern Malagasy – was noted by Father Luis Mariano in 1613. Nowadays, *hova* refers to freemen (or commoners) in Imerina, while in Betsileo country, the term still refers to aristocrats; in the Tañala Ikongo region, it refers to the men of the aristocratic group and to the king himself; and in the Mahafaly region, the king’s wife is called *valin-kova* (*valy*: “wife”). Prior to the *andriana*, *hova* chiefs probably ruled small kingdoms or chiefdoms in the Highlands (perhaps during the fourteenth and fifteenth centuries). The term *hova* can be linked to the Swahili *kubwa*, or *kuba*, “great, of a high rank.”⁸⁸ Among the ancestors of the Zafiraminia, one also finds the names Dian Alive, “Lord Ali the Great”; Ragomma,

⁸⁴ See also Délivré 1974: 396 n. 156 and Ramilison 1951–1952.

⁸⁵ F. Fanony, p.c., quoted by Wright and Rakotoarisoa 1997: 314.

⁸⁶ The legend told by Flacourt is a good example of anachronism and of confusion between traditions. “When he was at Lamanouffi (Analamanofo), Rahadzi heard that his brother had arrived at Mananjary. Rahadzi sent him an envoy named Geofarere, with some of his own slaves . . . Geofarere met Christians along the river; he spoke to them and asked about Racoube and his companions” (ed. Allibert 2007: 158). While I had thought that this Geofarere, who “met Christians,” may have been the Portuguese Ruy Pereira (1506), Geofarere instead transcribes a name that appears to be Gil Ferreira, and Ruy Pereira may never have traveled to the Matatàña region (L. F. Thomaz, p.c.) (see below).

⁸⁷ According to G. Ferrand 1902: 45, and my own translation. This text, which recounts Antambahoaka Zafiraminia traditions, was written only during the second half of the nineteenth century.

⁸⁸ *Hova* may also derive from the Arabic *qūwa* (pl. *-āt*), “force, power, efficiency.”

from the Swahili *guma*, “to be famous”; and Rahomado, from the Swahili “Hamadi” and the Arabic “Ahmed” (Flacourt, ed. Allibert 1995a: 149). These elements reveal the syncretic character of Zafiraminia culture. As for the name “Andriantomara,” it may derive from an Arabic root *tamar*, “gain, profit,” which refers to the trading activities of the “sea people.”

Both “Raminia” and Andriantomara, in fact, personify migrations spread out over time, during a period of increasing trade in the Indian Ocean. The infiltration of rice farmers from the east coast bringing in new techniques and new conceptions of the state certainly occurred progressively between the thirteenth and fifteenth centuries. Mythical traditions from the Highlands have crystallized these arrivals into the figure of the giant Rapeto (an equivalent of Darafify or Darafely on the east coast, whose link with rice cultivation has been pointed out), and into the story of the marriage of the Vazimba queen Rafohy (“The Short Lady”) with a “foreigner,” Andriamanelo’s father Ramanalimanjaka, depicted as a civilizing hero: Merina traditions link Ramanalimanjaka with various “inventions,” including circumcision.⁸⁹

Various researchers have suggested ancient connections between the Zafiraminia and the ancestors of the Imerina kings; however, is it truly possible to view the Zafiraminia or the *andriana* ancestors of the Merina kings as homogeneous “groups”? In each case, they are composite aggregates, the carriers of blended cultures. Right from the start, these two ensembles must have carried a common Indonesian, Indian, and even Muslim legacy; in addition, contacts probably occurred in Madagascar. One finds the title *andriambahoaka* in both the ancient kingdom of Imamo (western Imerina) during the seventeenth century and among the Zafiraminia. Ottino, who has connected the Zafiraminia with the “Vazimba” kings of Imerina, has shown the extent to which the mythical motifs of the “cycle of the Andriambahoaka” match historical Merina legends, as well as the convergence between the symbolic conceptions of the Merina and Zafiraminia aristocracies.⁹⁰

Zafiraminia and *andriana* from Imerina shared parts of the same Indonesian roots. Myths and religion in the Highlands and along the southeastern coast echo themes that are well known in Hinduism, in India, and in Southeast Asia. For example, one myth describes a miraculous tree that covers itself with gold and silver. P. Ottino has linked the introduction of concepts that we find in Malagasy political myths and – ideally – in the Merina, Sakalava or Tañala aristocracies to those of the Zafiraminia and to insular Southeast Asia, such as the need for the nobility to build itself upon both feminine and masculine lines (in Imerina, Prince Andriamanjavona captures the goddess Andriambavirano, who has fallen from the sky into a lake in the form of a scented leaf. He does this by pronouncing the ritual formula: “If I am truly noble through my father and

⁸⁹ Callet 1981: 72. According to legend, Rafohy lived in Alasora, southeast of Antananarivo. In addition, Merina traditions preserve the memory of Andriamanelo’s victories over Vazimba thanks to the use of “flying iron” (Callet 1981: 67). Hébert (2001) has interpreted the “flying iron” motif as the memory of the introduction of the crossbow into the Highlands.

⁹⁰ One also notes stonework in Imerina, as well as on the east coast.

noble through my mother, I will take her easily”).⁹¹ Other relevant concepts include the formation of a superior lineage providing wives for kings; transmission of divine power *hasina* through women, who, according to the Tañala, make up the “true nobility”; and a ban on hypogamic marriages for princesses. The importance of the king’s wife or sister, and of relatives through the female line, a distinctive feature of the Highlands and of the Tañala country, recalls Indonesian societies (and also ancient East African kingdoms).⁹² These principles may well have been present in Madagascar in earlier times, however.

The Zafiraminia influence on the ritual of Merina royal circumcision has been noted. Another common element is the ritual place of *Ficus* trees (Moraceae family). The *roandriana* of the Anosy and Androy regions, as well as the Merina *andriana* and the Betsileo nobles, all shared a veneration for *Ficus* that had been passed down from Insulindian beliefs viewing the *Ficus* as a tree of life linking the lower and upper worlds (see above) (Tobing 1956; Stöhr 1968: 82). At times associated with megalithic structures, the cult of *Ficus benjamina* was widespread in insular Southeast Asia. *Ficus* trees are still often believed to house spirits. “A sacred [*Ficus*] tree growing out of the top of a terraced pyramid is a well-known theme of the Javanese *wayang* shadow theater. In Kisar, it is believed that the sun god Upu Lera descends through the sacred benjamin tree [*Ficus*]” (Mahdi 1994b: 479 n. 164). Even today we see *Ficus* planted to the east of the “great houses” of the Tañala chiefs.

Alongside *Ficus*, various plants belonging to the Liliaceae or Amaryllidaceae families play important roles in Southeast Asia, in the Pacific and in Madagascar. J. Barrau has shed light on the place of *Cordyline fruticosa* (L.) A. Chev. (Liliaceae) in the Pacific, a plant cultivated as food, and even more often for its supposedly magic properties (Barrau 1965a: 57). It usually symbolizes clan continuity. While this plant is not known in Madagascar, *Dracaena reflexa* Lamk. (*hasina*) (Liliaceae), an endemic plant, plays a similar role in magic along the eastern coast and in the Highlands. Also, in the southeast, *Crinum firmifolium* Baker (called *betoitra*, “many sites [of houses]”), of the Amaryllidaceae family, planted at the foot of cultural posts, to the east of “great houses,” ensure the continuity of the lineage. This *Crinum* is called *vahondrano*, “water *vahoña*,” in ancient Tanosy and in Merina; this name appears to be related to the Malay *bakong*, referring to various *Crinum*. *Vahoña* usually refers to *Aloe* (Liliaceae) in Madagascar. In the Mahafaly region, *vahontsohy* (*Aloe* sp.) are planted to the east of the houses of chiefs. Vegetative reproduction characterizes these plants, which are linked to the spirits of life.

In spatial and temporal symbolism, related to concepts of power, some elements are common to all groups, but there are also some notable divergences that reveal distinct influences.

⁹¹ Callet 1981, 1: 12 n. 1. The fall of an odoriferous leaf brings to mind the Muslim myth mentioning leaves from the twigs Adam took with him to Earth, from Paradise.

⁹² Cf. for example what W. G. L. Randles describes for the Monomotapa (1975: 86–87), and the importance of the mother and of the “Sister-Queen” of the king in the Nkole, Nyoro, and Ganda kingdoms (Heusch 1987: 63–87).

Space Structure and Political Power

The Center and the Cardinal Points To the east–west and upstream–downstream references already known to the migrants from Kalimantan and other islands, the arrival of the Zavaka, Zafiraminia, and ancestors of the Imerina kings added the structure of the center and the cardinal points (4 or 8 directions, with a preeminence of the northeast).⁹³ This was a characteristic of both “the cycle of Andriambahoaka” (myths) and of the “historical Andriambahoaka kings of Matacassi [Zafiraminia] and Imerina.” This structure was added onto the division already in place between the upper and the lower worlds, and reorganized color-based symbolism (see above) (Ottino 1981, 1986: 15ff.; Beaujard 1991, 2003). In Madagascar, as in the Javanese *munca-pat*, the center unites the four colors; these colors are linked to the four cardinal points, which are also connected to four elements: red and fire are associated with the north, white and water with the east, black and earth with the south, and yellow and stone with the west (Beaujard 1991: 541–542; for Indonesia, see Damais 1969: 97ff. and Van Ossenbruggen 1977). The center marks the junction of a line connecting the earth with the zenith of the universe (where the god Zañahary of the Upper World resides) and the nadir (the dwelling of the Zañahary of the Lower World). The center is also the place where the four cardinal points meet, a fact that is made clear by the invocation of the Zañahary during sacrificial rituals on the southeastern coast: first, there are four divinities (“the Zañahary of the four directions”) and later they become one: “the Zañahary dwelling in the center,” representing their synthesis (conversely, the Zañahary of the four cardinal points can also be seen as emanating from the Zañahary located in the center). Hindu and Buddhist concepts (cf. the five heads of Brahma, and the five *jina*) have clearly influenced this idea of five (4 + 1) associated Zañahary.⁹⁴

Terrestrial space is ordered according to a north–south axis linked to power and an east–west axis linked to the sacred. The space of a Tañala village is thus divided into two zones: the north and the east, on the one side, linked to nobility, with the south and west associated with the autochthonous people (and to slaves), on the other. The “great house” of the autochthonous chief is often erected south of the “king”’s house, and in a lower position; but it can also be erected to the east (or to the southeast), in reference to the religious role of the autochthonous chief and his status as “elder on the earth”: the east is the direction of what we might term *socialized* death; it is the direction of seniority, associated with the ancestors, toward which the community turns during rituals, while the west is the direction of untamed, *wild* death, monsters,

⁹³ J.-C. Hébert (1965b) was the first to point out this preeminence of the northeast and its Indonesian origin, within the system composed of the center and the cardinal points. There is one exception in Madagascar: “in the extreme-south [of the island] and for a few aristocratic lineages of the west, the south is the preferential direction” instead of the north (Ottino 1998: 562–563). The Makoa living in northwestern Madagascar did not turn toward the east during invocations, but toward the west (C. Radimilahy, N. Gueunier, p.c.).

⁹⁴ Biarreau 1981; Mus 1935: 472. In invocations noted in southeastern Madagascar, the five divinities bear different names (Gaudebout and Molet 1957: 62; Ruud 1970: 98). Note that garlic and onion – forbidden to Buddhists – are still taboo for many clans in the Highlands and for royal fetishes (*sampy*) (Domenichini 1985).

and man-eaters.⁹⁵ With reference to the “cycle of [the myths of] Andriambahoaka,” P. Ottino has pointed out that the west and the south, devalorized, house “monsters deriving from Bantu mythology; this remark takes on its full meaning” within the context of these texts’ “Indonesian” symbolism. In addition, the interiors of the “great houses” of the two Tañala chiefs highlight the opposition between the north (the direction of royal power) and the south (direction of the political power of the autochthonous people). In the royal houses, as in the myths from the Highlands and the Tañala country, two regions are in opposition: the northeast-higher region versus the southwest-lower region. This partition, notes P. Ottino, can be observed in the Korawasrama, the Javanese cycle of the *Mahabharata*, and in *wayang* shadow puppet theater. On Bali, the floorplan of the palace expresses an opposition between the northeast, where the temple is located, and the southwest, open to all (Swellengrebel 1960: 42. Goris 1960a: 99). Situated at the confluence of political power (north) and religious power (east), the preeminent northeast is linked to the king and to the ancestors in both maritime Southeast Asia and Madagascar.

The structure of the center and the cardinal points corresponds to a hierarchy in spatial organization as well as an underlying political agenda (cf. “Imerina composed of four parts” [*Imerina efa-toko*] by King Andriamasinavalona during the seventeenth century); these conceptions can be connected to Southeast Asian data. The centralization of authority in the figure of the king accompanied a hierarchization of groups (there were four aristocratic groups in Imerina during the sixteenth century, and then seven during the seventeenth century). The king, who orders space, is the “master organizer of social status” (Raison-Jourde 1983a: 38). This organization of space and society in the Malagasy Highlands parallels what can be observed in the great kingdoms of Java and Southeast Asia in general; it relies upon the same original ideology (Mus 1935: 295ff.; Lombard 1990, 111). Here, Ottino has written of “the philosophical concept of Indian origin of a god-king,” who is symbolized in Madagascar by the mythical hero Ibonia (see Noiret 2008). In Betsileo country, the dominance of the center over the cardinal points and their association were expressed by the shapes of strange “hats of [raised] stones” (*satro-bato*), and by shelves for offerings set atop posts erected to commemorate ancestors. The motifs carved on these posts reflect this symbolism. A cross in the middle of concentric, more or less quadrangular lines recalls the cross decorating the caps Antambahoaka children wear during the Sambatra feast of circumcision. This cross was also known among the Zafiraminia in Anosy, and has been noted on tattoos. Zafimaniry sculpture plays upon the same motifs.

While the implementation of symbolism regarding the center and the cardinal points has been attributed to the arrival of the Zafiraminia as well as to ancestors of the Imerina kings during the thirteenth and fourteenth centuries, cultural inflows from Austronesian groups arriving earlier may also have contributed to this implementation.⁹⁶

⁹⁵ Of Bantu origin, Trimo is the name for man-eaters in Malagasy tales.

⁹⁶ One might even contemplate a dual system of location in space following the first migrations, a system that may be linked to the existence of popular and aristocratic cultures. However, linguistic, historical, and anthropological data reveal how influential the new Indonesian arrivals of the thirteenth and fourteenth centuries proved to be in the fields of symbolism and politics.

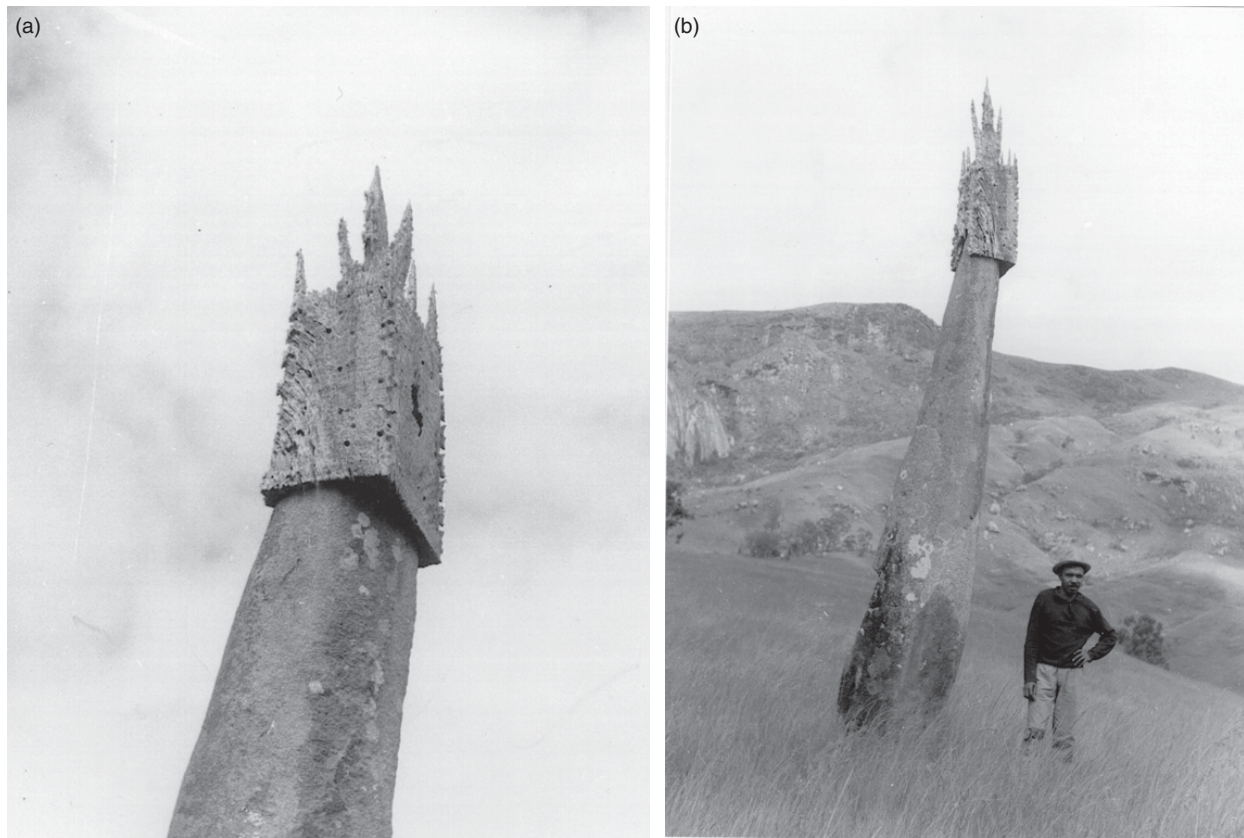


Figure 13.1 A “male stone” *vatolahy* topped by a “hat” with a tip (or a pair of horns?) in the center of a crown bearing four shorter spurs indicating the four cardinal directions; these top five other spurs (there may have been eight in the past) sit atop a square sheath. The carving of the stone and its symbolism of the center (the zenith) and the cardinal points, legacies from indianized Indonesia, suggest that this monument may commemorate a sovereign. Photographs from the Musée d’Art et d’Archéologie, Antananarivo

The Mouth of the River and the Twelve Mountains Alongside the structure of the center and the cardinal points, two distinct Insulindian symbolic systems have influenced Malagasy kingdoms, and both are inherited from the indianized period. P.-Y. Manguin has given us a good description of the first system for Srīwijaya and the Thai–Malay peninsula:⁹⁷ the king controlled the mouth of a river (and all trade developing at this location) as well as the region upstream, including the main tributaries, where he built alliance relationships with local chiefs, installed vassals, and erected temples at the confluence of two streams (later, he might attempt to control other river systems, with his capital thus located at the center of his networks). The elder dwelt downstream, and the junior upstream. This symbolism is found along

⁹⁷ Manguin, 2000d, 2004. See also Bronson 1977: 42, Wisseman Christie 1990, and Hall 2001c: 217–219 with reference to Pasai. Hall notes that, in order to reign over the downstream region, the approval of the upstream region is needed, since upstream is the source of products for export and of magical power. Junker (1994: 25) describes a system similar to the “Srīwijayan model” on Negros Island, in the Philippines; she notes the associated development of coastal/inland and coastal/overseas regional trade relations, and the simultaneous empowerment of coastal chiefdoms.

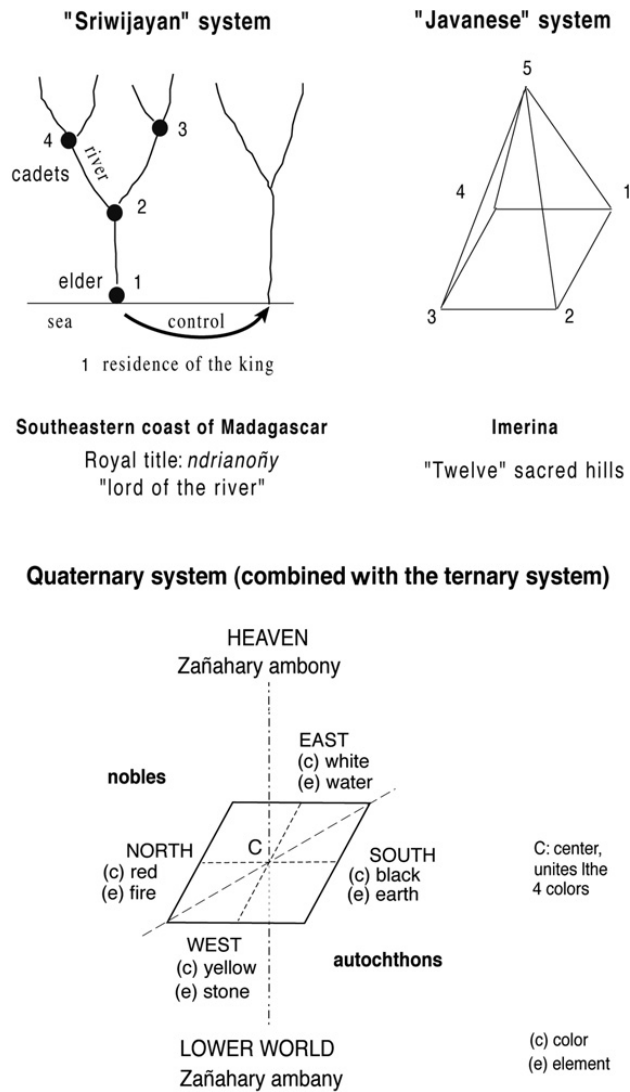


Figure 13.2 Madagascar: symbolic systems inherited from indianized Indonesia

the southeastern coast of Madagascar (among the Antambahoaka, the Antemoro, and the Zafiraminia Antanosy): a *ndrianoñy* king, "lord of the river," was the master of its mouth, where specialized rituals such as feasts of circumcision and royal funerals took place. In the Antemoro kingdom (which inherited Zafiraminia beliefs), the region downstream was linked to primogeniture; when a rice field was divided, the elder son inherited the parcel of land downstream. This symbolism is reversed among the Tañala of Ikongo, where the elder son receives the rice fields located upstream. The Tañala have preserved the type of spatial symbolism that is found among Austronesian groups such as the Ngaju of Kalimantan, where upstream-high-east contrasts with downstream-low-west. Control over water by the king also had a magical component. In Sriwijaya, the connection between the king and water was so strong that the king could not bathe in ordinary water, out of fear that doing so would cause flooding. This relationship with water has close connections with the king's fertility power. This idea with regard to the royal bath has also been found in Madagascar, in Imerina, and

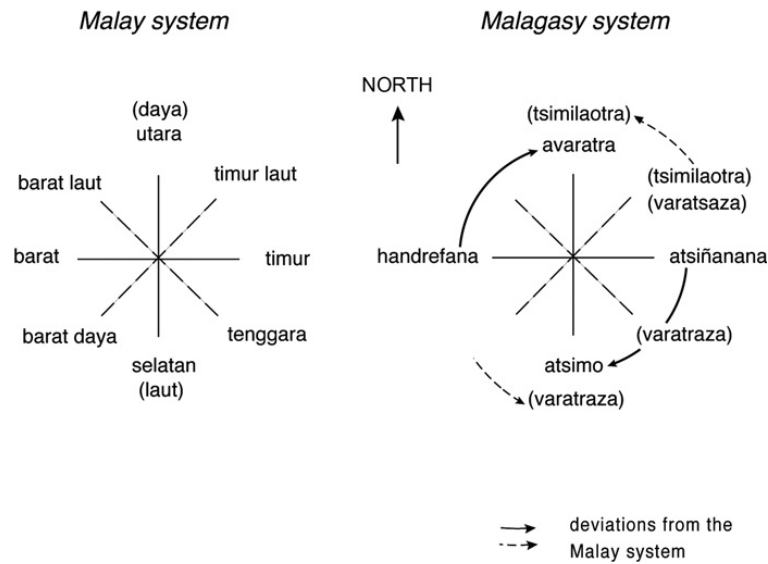


Figure 13.3 Compass rose: Malay system and Malagasy system

among the Antemoro; evidence is also seen in the bathing of royal relics at the mouths of rivers along the western Malagasy coast and in the Tañala region (Ikongo).

The second Maritime Southeast Asian system developed in inland Javanese kingdoms; during the eighth century, each of the Sailendra kings bore the title “king of the mountain,” and Srīwijayan rulers later inherited this title.⁹⁸ “The [Javanese] king,” writes Miksic (2004b: 863), “was perceived as being directly associated with Mount Meru in its role as axis of the world and was its master.” As previously noted, this title reflects the adaptation of Indian concepts to Indonesian beliefs envisioning gods and divinized ancestors as dwelling on mountains. The Sailendra dynasty ruled over an agrarian state, and this same desire to structure space and organize rice cultivation appeared again in the kingdoms of Mataram, Keḍiri, and Mojopahit.⁹⁹ In Madagascar, too, the Merina kingship relied upon these same principles. The royal space was structured by “twelve sacred hills”; the king resided at the zenith of the world (in the “Srīwijayan” system, the king is also located at the center of the universe) and he ordered the various steps of rice cultivation (see below). In ancient Imerina, from the fifteenth century onward, elevation marked hierarchy within each village, and between villages (Rafolo 1994: 93; see above).

The aristocratic chiefs of the ancient Tañala kingdoms of the Ikongo region (eighteenth–nineteenth century) were placed at the junction of the two systems. Today’s

⁹⁸ The idea of magical power emanating from high places was also known in Srīwijaya. The founding inscription at Kedukan Bukit (Palembang) was erected at the base of the sacred mountain of the kings of Srīwijaya, Bukit Seguntang (Andaya 2001: 320).

⁹⁹ The coexistence of these two systems in Southeast Asia has been noted by Hall, 1992: 205. There are also shared elements, due notably to parallel Indian influences. Moreover, Sailendra reigned over Srīwijaya during the ninth century.

Tañala aristocracy has inherited some Zafiraminia ideas; one of the king's titles is *ndrianoñy manaña valo siràña*, "lord of the river who owns eight areas for putting ashore canoes" (cf. also the name of the royal clan, Maroseràña, on the west coast, "[those with] many places for putting canoes ashore"). As in Imerina, the Tañala *ndrianoñy* is a "king in the middle of the earth." His house, located at the center of the village, is the highest; it has eight doors (symbolizing the king's power over the eight directions) with which eight vassal regions are associated, as well as "eight places along the river" (see above), and "eight pillars supporting heaven" (*joron-tany valo*) at the ends of the earth. The house and the king himself represent the kingdom and the entire universe: the king is therefore located at the center of a series of nested microcosms. P. Mus has emphasized the importance of this symbolism, showing a correlation between the division of space and the political system, which is influenced by Hindu and Buddhist beliefs in most of Asia, as well as in ancient China.¹⁰⁰

G. Condominas has pointed out parallels in symbolic concepts of kingship between Imerina and the Tañala country, on the one hand, and the Malay world, on the other. The king is "the bridegroom of his spouse-people"; this metaphor, expressing an alliance between nobles and autochthons on both the religious and political levels, recalls a similar theme in Malay political mythology (in Ikongo, aristocratic chiefs *mpanzaka* and autochthonous chiefs *anakandria* are said to be "like husband and wife"; the Tañala "great *anakandria*," descended from the region's original occupants and the bearer of wisdom, "appears similar to the First Minister of the Malay political myths," to whom the Merina First Minister Rainilaiarivony can also be compared: he was husband to three successive queens during the nineteenth century (Condominas 1989: 16). According to another Malay theme, the king is "the younger brother of his subjects"; similarly, among the Tañala, the autochthonous chief *anakandria* is seen as "the elder" of the noble chief *mpanjaka*. In Timor, as in Madagascar, "heaven" is placed in a "junior" position, although it represents the upper, dominant moiety. According to another feature of Asian kingship, the Merina king shaded himself with an umbrella; this umbrella was red, as red was a solar symbol connected to royal power, which was also the case among the Zafiraminia and all other Malagasy kingships. The king tended to be identified with the noon sun: in the sovereignty myth of Ibonia, the hero is born when the sun is at its highest. The enthronement of a Tañala or Antemoro king still takes place when the sun is at its zenith. One song of praise addressed to the Merina queen, during the nineteenth century gave her the title of "sun."¹⁰¹ Gold, seen as a solar metal, was reserved for the king's use.

The data collected reveal the syncretic character of Zafiraminia culture – in which Indonesian, Indian, Arab, and Swahili legacies are blended – and of Merina royal beliefs. Within the Indonesian legacy, it would be wrong to simply view a "Sriwijayan" Zafiraminia system as the opposite of a "Javanese" Merina system. While data relating to the Zafiraminia also highlight links with Java, the Merina features show Malay influences. It seems highly appropriate to address the data, not by taking an "ethnicist"

¹⁰⁰ Mus 1935, I: 269. On the Sriwijayan model featuring concentric circles emanating from the king and his residence, see Manguin 2000d: 162 fig. 1.

¹⁰¹ Dahle 1971: 268, quoted by Rakotomalala *et al.* 2001: 46. When the sun is at its highest, the ancient Merina used to say: "Here is God above the ridge beam" (Dahle 1971: 268; Callet 1974, I: 176).

approach, but by taking into account the processes of hybridization that characterize these cultures which P. Ottino has named “fringe cultures.”

Mastering Time

It is possible that the Zafiraminia (or other Austronesians prior to them) introduced the monthly calendar of Sanskrit origin (at least for nine or ten of the months) on the eastern Malagasy coast via Indonesia. This religious calendar was linked to the agricultural cycle. Hébert has postulated that the names for seasons found in Madagascar, of Sanskrit origin, derive from homophonous names of months, and arrived in Madagascar prior to the series of month names. These names for the seasons are: *asara*, rainy season; *asòtry*, dry or cooler season; *faosa*, period of transition between the cooler season *asòtry* and the hot season *litsake* (Vezo, Masikoro); *faosa* is the spring season, a dry, warm season, the time of year when there is not much food to eat (Gueunier, p.c.).¹⁰² Simon has partially refuted this proposition, by showing that the names of the seasons are derived from other Sanskrit terms than the names of the homophonous months with which they have been confused.¹⁰³

Simon argues that the introduction of these names of Sanskrit origin goes back to the first Austronesian migration and to a period he labels “Indonesic Proto-Malagasy.” This is inconsistent with a remark made by Simon himself: “from a phonetic point of view, an eastern Malagasy origin is certainly admissible for the calendar showing twelve terms deriving from Sanskrit, in western Madagascar (/tr/ and not /ts/,¹⁰⁴ /ts/ and not /t/ before /i/). The use of this calendar spread from east to west” (1988: 83). This calendar of Sanskrit origin must have been introduced on the east coast after the arrival of the first Malagasy, as Hébert notes. Yet it must have been introduced very early, since one finds it throughout Madagascar, with some discrepancies in months according to regions. Simon states that a Malagasy calendar which began in July–August corresponded to a “trade calendar” aligned with the Indian/Indonesian calendar (2006: 250–251); according to Simon, neither of the two types of calendars (the agricultural and religious calendar, and the trade calendar) imply the existence of “two distinct Indonesian waves; rather they correspond to two different uses arising from the same legacy.”

¹⁰² O. C. Dahl (1991: 117) shares this view. It may be that the names for the seasons were introduced into Madagascar prior to the names for months. According to Hébert (1968b: 75, 84), the fact that “older loanwords have driven out homophones from the monthly calendar” is evidence of the antiquity of the names *faosa*, *asara*, and *asòtry* for the seasons, with respect to the names for months. *Faosa* has been replaced by *Birà*, *Birae* in Vezo and in Masikoro, by *Zaray* in Sakalava, and by *Fampandro* in Antankaraña. The two months called *Asara* have given way to *Pitsamaimbo* and *Pitsamanitse* in Vezo–Masikoro, and to *Lohantsaba* and *Sahôve* in Antankaraña (Hébert 1968b: 75). Instead of *Asòtry*, one finds *Mianjolohe* in Sakalava and in Vezo–Masikoro. In fact, these replacements of monthly names occurred almost exclusively on the west coast and in the north (with a few exceptions such as the replacement of *Asòtry* by *Safary* in Antanosy and in Antandroy).

¹⁰³ Simon derives *asòtry*, “dry or cooler season,” from the Skt. *śuddhi-*, “purity, verification, information”; *faosa*, “dry and warm season, the period of the year without much to eat,” from the Javanese *puasa*, “fast” (Skt. *upavāsa*, “to fast”); and *asara*, “rainy season,” from the Skt. *āsāra-*, “heavy shower, rainy season” (Simon 2006: 248–249).

¹⁰⁴ In fact, from **d*, one often observes *tr* in the Malagasy loanwords, not *ts*. Note, however, the term *Vattevaets* given by Houtman, and *Vatsavatsa* noted at Vangaindrano (Thomas 1908: 25).

According to Simon (2006: 248), “in the west, [the Sanskrit calendar] was superimposed on an earlier calendar, still partially in use in the south among the Vezo; traces of this early calendar still exist in Sakalava and in Antankaraña under the forms *Biray*, and *Zaray* for the first months” (see also Hébert 1960, for the Ambongo). A numerical calendar may have been used on the west coast prior to the Sanskrit calendar. Among the Mahafaly and the Vezo, numerical calendars have been noted (*volan’isaka*, or *volan’isa*, “first month,”¹⁰⁵ *volam-paharoa*, “second month,” and so forth). The eleventh and twelfth months bear the curious names *ambim-bola*, “additional month,” and *volanaria*, “month that is dismissed.” While this numerical calendar can be linked to Swahili and Comorian calendars (in which the last three months have names deriving from Arabic), Julien also connects it to a calendar used by the Chams of Cambodia. Prior to the Indian influence, populations from Southeast Asia used a numerical calendar based on a decimal system (which explains the particular names for the eleventh and twelfth months).¹⁰⁶ Damais has noted a Javanese (solar) calendar that was in use prior to the introduction of the Indian calendar; this Javanese calendar relied upon the “observation of certain stars” such as the constellation of Orion.¹⁰⁷

Three names on the Indian Sanskrit calendar have disappeared from the Malagasy calendar: *Caitra*, often the first month in the Indian calendars; *Jyestha*, the third month; and *Phalguna*, the final month. Instead of these names, the Malagasy calendars show *Sakamasay* (“little *Saka*,” in contrast to *Sakave*, “great *Saka*”), *Volambita* (from *volaña*, “month,” a word of Austronesian origin, and *vita*, from the Sanskrit)¹⁰⁸ and *Hiabia*. *Volambita* was the most important month of the calendar (see below) which explains its name and place in the calendar. The possible Austronesian origin of *Hiabia* has been noted; its origin, however, is not “Oceanian” as Hébert has suggested (according to Simon [2006: 251 n. 51]; it may simply be a translation of the Sanskrit *Phalguna*, February–March, “lean month”). Note that these four months follow one another (usually in the order *Hiabia*, *Sakamasay*, *Sakave*, and *Volambita*): they cover a crucial period of the year.

Moreover, the name for the Malagasy month *Asòtry* may be a loanword from the Javanese “*Asuji*,” which, according to de Casparis, derives not from the Sanskrit, but from a Proto-Hindi form **asuja* or **asoja*. This is the month when people paid their land taxes in Java (as was the case in Sri Lanka), and it was the only month in the Javanese calendar whose name was not of Sanskrit origin.¹⁰⁹

¹⁰⁵ This “first month” probably corresponded to different periods of the year throughout the island: it appears to have been linked to January in the Ambongo region (Hébert 1960), and to March in the Vezo-Sara (during the twentieth century) (N. Gueunier p.c.).

¹⁰⁶ J.-C. Hébert (n.d.b: 49) has provided me with the numerical Jörai, Cham (non-Muslims), Javanese, and Sundanese (Badui) calendars. I am grateful to J.-C. Hébert for allowing me to use this unpublished manuscript.

¹⁰⁷ Damais 1967: 134. This old Javanese calendar may have started in June, while the later calendar of Indian origin started in *Caitra* (March–April). A lunisolar calculation of time was probably borrowed from India alongside the *Saka* era.

¹⁰⁸ I have suggested a link between *vita* in *Volambita* and the Sanskrit *-vrttā*, “finished, accomplished.” However, *vita* does not appear to be a Malay loanword: *-vrttā* has become *berita*, “news,” in Malay, and *balita*, “famous, well known” in Tagalog; the term must derive either directly from the Sanskrit or from the Old Javanese *wrtta*, “event, news”.

¹⁰⁹ de Casparis 1988: 53–54. This Proto-Hindi form may also be the source of the Mōn *Asut*, and of the Thai *Asoc*. Note that the Malagasy *Vatratratra* derives from the Sanskrit, via the Javanese *Bhadrawada* (de Casparis 1988: 54).

Unfortunately, with a few exceptions, we do not know how the Sanskrit calendar was used in the various regions of Madagascar: was this calendar lunisolar, as it was in India, continental Southeast Asia, and Java? Or was it a solar calendar? (In Bengal, and in the Tamil country, the names *Caitra*, *Vysakha*, and so on are used for the solar months, as had previously been the case for the agricultural Bugis calendar [Pelras 1987: 22]). J.-C. Hébert considers the Sanskrit months as belonging – originally – to a solar calendar, a characteristic that Ramilisonina (p.c.) has noted for the western Bezanozano country. In fact, there may have been several introductions of “Sanskrit calendars” into Madagascar, as well as reinterpretations of these calendars. In the Tañala region of Ikongo, these Sanskrit months were linked to the cycle in vegetation and agriculture; neither Ardant du Picq nor I have observed any doubling of a month, although the months of the Sanskrit calendar are now viewed as lunar, in clear contradiction with any link to the agricultural cycle. By contrast, for the Northern Tanala, R. Linton has mentioned the doubling of a month whenever a discrepancy was observed between the calendar and the seasons (Linton 1933: 211). This doubling of one month may have been practiced in other regions. In the south (Anosy and Androy), the lunar months appear to have been connected to months in the Gregorian calendar: this implies the introduction of an intercalary month (Thomas 1908: 25). As Hébert suggests, the duplication of the names of certain months (*Sakamasay/Sakave*, and *Volambitafoañà*, “Empty Volambita”/*Volambitabe*, “Great *Volambita*”)¹¹⁰ may correspond to the now-forgotten practice of doubling one month in order to make the lunar year and the solar year coincide. According to Simon, *Volambitafoañà* corresponds to the Sanskrit *upavāsa-vṛtta-māsa*, “the fast-breaking month” (Simon 2006: 250). *Foañà*, “empty,” derives from the PMP **puhan*, “empty.”

While I disagree with P. Simon about the dating of the arrival of the system of Sanskrit months, I partly support his description of an ancient religious system centered on an annual celebration marking the entry into the new year. This feast, which included a ritual bath, bears the name *nepuk taun* “in Pasir, the Northeast Barito dialect which is the closest to the Samihim [a Southeast Barito language].” According to Simon, *nepuk taun* (from **te(ŋ)puk*) means “to join the years together” (?) (2006: 250). Simon connects this name to the Malagasy term *fitampoha* or *tampoke* which refers to the bathing of the royal relics in the Sakalava or Masikoro country (I have suggested, however, that the etymology *tampuk* expresses the idea of a beginning);¹¹¹ Simon also mentions the name *fañempoko* for an Antankaraña month in connection to *nepuk taun* (the name is not *fanempoko* as Simon writes [(2006: 250): therefore the radical here is *empokol/empuka* [whose meaning is unknown] and not *tempoka*). This month *fañempoko* follows the month called *fampandro*, “to bathe,” a likely reference to the Bath feast; it corresponds to the *Volambita* of other regions. At Marovoay (Boina, northwest), “the celebration of the tombs of the Sakalava kings always occurred in *Volambita*, which corresponded to our month of June” (Thomas 1908). The Tañala of Ikongo bathed the royal relics during the *Volambita* month (October). Among the

¹¹⁰ For Asaramañitra/Asaramantsy, the Sanskrit names may explain this apparent doubling: the month Śrāvana has been memorized as Asara, which is also how *āṣāḍhā* is pronounced.

¹¹¹ In Iban, *timang tampok wi* refers to a ritual accomplished on entering a new house (Richards 1981: 364) (*timang*, “song of prayer”; *wi*, “call”). Moreover, in Javanese, *tapuk* means “to start, to begin.”

Antambahoaka, the great feasts of circumcision, called *sambatra*, which occur every seven years, are celebrated during the *Volambita* month, to the present day. The year probably began with the month *Volambita*,¹¹² which on the southeastern coast corresponds to spring, which is called *lohataona* (“head of the year”) in the Highlands, and *faosa* in the south and the southwest (*loha* compares with Ngaju *haluan*, “prow,” Katingan Dayak *aluhan*, *id.*; Simon 2006: 371). “The Malagasy words *asotry* and *faosa* may have been initially connected to the annual celebration (June–July, in Borneo)” (Simon 2006: 250).¹¹³ The season called *faosa* has been linked by P. Ottino and P. Simon to the Malay or Javanese *puasa*, “fast, abstinence,” which derives from the Sanskrit *upavāsa*, “to fast.” In various kingdoms, the Royal Bath occurred at the end of a period of abstinence: the Antemoro abstained from drinking alcohol for one month; in Imerina, the abstinence applied to meat, for the five days preceding the Royal Bath. In northern Madagascar, the months *fahosa* (or *faosa*), *fampandro*, and *fañempoka* followed one another. In Flacourt’s time, the Antanosy practiced the “*miafoutche*” (*miafose*?) (fast, from the Malay or Javanese *puasa*) for one month; it ended with a bath. The “*miafoutche*” was another striking example of syncretisms in Zafiraminia culture. According to Flacourt, this period was composed of a month of fasting, which the Antanosy and the Antemoro called “Ramavaha” (Ramaḍan). The end of the ritual, marked by the consumption of rice with honey, the bath of the king and dignitaries, and the sacrifice of a zebu, clearly shows that this celebration was similar to revival festivals such as the Merina Royal Bath (Fandroana), signifying the entry into the new year. These feasts can be compared with rituals in Southeast Asia (Flacourt, ed. Allibert 1995a: 159–161, 360).

In the past, the Tañala observed stars during the *Volambita* month, in order to set the calendar. These stars were probably the Pleiades, which rise in the east at the beginning of the night around mid-October. The existence of an agricultural calendar based on the observation of the Pleiades has been noted in Kalimantan (Iban, Dayak);¹¹⁴ Sumatra (Aceh); Sulawesi (among the Eastern and Southern Toraja, and the Mori); Bali; and in various Polynesian societies,¹¹⁵ as well as in East Africa (Zulu . . .).

¹¹² Father Webber gives *Volambita* as the first month, in connection with *Alahamaly* (1853: 775). Decary and Faublée (1958: 229) and J.-C. Hébert (1968b: 61) agree, stating that “*Volambita* was the month during which the traditional ‘New Year’ was celebrated” on the eastern Malagasy coast. According to Leblanc (Thomas 1908: 25), among the Antandroy of the Faux-Cap region, *Volambita*, “which always falls in August,” is the first month of the year. The Imamono Bara “wait for *Volambita* [moon of August] to build their huts, and undertake important affairs; they appear to consider this month as the most important of the year.” The first day of this month, for them, “is almost the first day of the year” (Thomas 1908: 25). A Betsileo saying indicates that “the month *Volambita* is the elder in the year” (Dubois 1938: 1405). It is difficult, however, to share Hébert’s view when he writes about the Betsimisaraka calendar that “as everywhere else in Madagascar, it begins in September.” In many calendars, the year started in March, at least during the nineteenth and twentieth centuries. Various transformations may have occurred over time.

¹¹³ Note that in Madagascar “the seasons are reversed from those of India” (Simon 2006: 250).

¹¹⁴ Van der Weijden 1981: 58, 65, 93, 97; Nilsson 1920: 138, 248, 275.

¹¹⁵ The Polynesian year was lunisolar and probably started in June, at the heliacal rising of the Pleiades (Hébert n.d.b).

The Expansion of Wet Rice Cultivation

The migrants from Kalimantan had introduced rice, which they cultivated using slash-and-burn techniques and which they sowed in marshes. The new Austronesian arrivals from the twelfth to the fourteenth century introduced new varieties of rice and imposed intensive wet rice cultivation; this was linked to the development of kingdoms marked by strong social differentiation along the east coast and later in the Highlands.

The Austronesians from Kalimantan had brought the term *bari/vary* with them, for rice. While other migrants introduced the Austronesian term *parei* or *pari* which derives from the PAN **pajey*, “a rice plant” (Blust 1984), this term *parei/pari* was applied instead to sugarcane, probably because the word *vary* had already come into use to designate both the rice plant and its grains. In Imerina, *fary* has the meaning of “rice” in the name Amparibe, a district of Antananarivo.¹¹⁶ *Kifarifary* and *tsimparifary* (“which looks like rice”) are names given to weed grasses in wet fields in various regions of Madagascar. In Imerina, a variety of these weeds is called *farimanga* (“rice with purplish stems,” or “rice from East Africa”). Froberville (1963) gives *fare*, “millet” (east coast). A myth of Betsimisaraka origin collected in the Tañala region also cites *farifary*, meaning “rice” (Beaujard 1991: 393). The introduction of the word *pari/fary*, meaning “rice,” ought to be linked to Austronesian arrivals during the second millennium: it is probably not a relict-term, as Simon and Adelaar have suggested. This reintroduction of the term *fary* must have arisen from Javanese *pari*: a loanword from the Malay would have yielded a form such as *fatry* or *fady/pady* (Adelaar 2016). The ancient term *faria* (“parcel, in wet rice cultivation,” in Imerina, where one also finds *valamparia*, “levee”) derives not from *fary* but from *fariha*, which Dez (1960: 33) has noted in the southern Betsimisaraka dialect. *Fariha* derives from Skt. *parikhā*, “ditch” via an Austronesian intermediary (Adelaar, p.c.).

Although the vocabulary of wet rice cultivation is of Insulindian origin, it does contain several words of Indian origin, introduced via insular Southeast Asia: *farihy* (“marsh, rice field”), and *talaba*, *tahalaka* (“levee”), are from Sanskrit (Beaujard 2003).¹¹⁷ In addition, I have suggested (Beaujard 2003) a Dravidian origin – via an Indonesian language – for the Malagasy term *horaka* (“rice field, marsh”) used along the east coast (Tamil, Kuttanad: *kulam*, “water tank”; cf. also Sanskrit *kūla*, “pond, bank”; Malay, Iban: *kulam*, Jav.: *kulah*, Makassar: *kolan*, “pond”). While Adelaar (2007) has criticized this hypothesis, we do find *kulak* in Malay (Favre 1875, 1: 298), and the alternation *l/r* is common in Malagasy and in words borrowed from other languages. J. Dez had suggested – and Ottino has developed this idea – that Dravidian India influenced the Malagasy vocabulary of wet rice cultivation. Adelaar (1966) has shown that none of the etymologies proposed by Ottino proved to be correct, except – partly – the word *vari*.

¹¹⁶ Domenichini-Ramiaramanana 1988: 203–204. A Merina tradition holds that “the grandsons of [the mythical giant] Rapeto were buried [in a place called] Amparibe, to the east of Ambohipotsy” (Callet 1981: 17).

¹¹⁷ According to J. G. de Casparis (1988: 63), however, the Indonesian *talaga* derives not directly from the Sanskrit, but from a “Middle Indian” (Prākṛit) form.

The first Austronesians had arrived in Madagascar without oxen.¹¹⁸ The zebu was introduced from Africa around the ninth century. As noted above, the Austronesians who arrived during the second millennium carried on the ritual sacrifices they had practiced in insular Southeast Asia, using the zebu. Moreover, they used this animal for the preparation of rice fields. The technique of trampling by bovines practiced on the Malagasy wet rice fields is known in many regions outside Madagascar, such as Indonesia, Vietnam, and Sri Lanka.¹¹⁹

While some rituals practiced in wet rice cultivation differ from the rituals practiced on hills, they mirror Insulindian practices, nonetheless. Among the Antambahoaka and the Antemoro, along the southeastern coast, before the trampling of the rice field, elders would sprinkle the zebus with a mixture of water, rum, and sometimes the blood of a zebu that had been sacrificed. In ancient times, no one could trample his own fields unless the ruler had first trampled the royal rice fields. Similar ceremonies in which buffaloes were sprinkled before trampling have been described in insular Southeast Asia (Van der Weijden 1981: 77, 106, 136, 183, 218). Trampling represents a symbolic sexual act that the king – personified by buffaloes or zebus – performs with the wet soil, which has a feminine connotation.

Unlike the rituals practiced in swidden cultivation, which are often oriented according to ancient Austronesian spatial references (the east–west axis of the sun; an upstream/downstream opposition) and do not differentiate any social class, the wet rice cultivation rituals practiced by the Tañala and Betsileo take the four cardinal points into account and express a social hierarchy (nobles versus indigenous people and slaves), with tiered offerings presented on shelves (cooked rice and mead); such rituals mirror the sacrifices of zebu *soro* held near the “great houses” of the village or – in ancient times – held near the royal rice fields prior to the harvest in the southern Betsileo region.

All of the above demonstrates that Austronesians who arrived from Indonesia at the time when the archipelago had been indianized became instrumental in developing wet rice cultivation; at the same time, they formed new kingdoms that were based on a strict hierarchization of social groups. These Austronesians from the indianized period introduced new terms and concepts – as the variations observed in rituals have led us to believe.

Myths and historical traditions express a hierarchy in which rice, as a “white” plant, associated with the king, holds a higher status than do “black” plants (yams, taros), which are linked to the autochthonous people (see above). A symbolic opposition between rice and “native foods” is also seen in the Comorian archipelago (see Blanchy 2011: 233). The Antemoro and Merina kings were managers of water. According to the *History of the Kings of Imerina*, rulers living at Alasora undertook containment works along rivers during the fifteenth and sixteenth centuries (Callet 1981: 276). During the seventeenth century, Andrianjaka transformed the swamps located south of

¹¹⁸ The existence on the southeastern coast of the word *lambo* with the meaning of “cattle, ox” has been mentioned above. Here, we do not see the original meaning retained over the centuries, but rather the result of a reintroduction of the word *lambo/lambu* from the Malay world.

¹¹⁹ Abe 1984: 202; Gourou 1984: 44; Pelras 1996: 102. Outside Madagascar, buffalo usually do the trampling of the rice fields.

Antananarivo into wet rice fields; later, various kings – among them Andriamasinavalona – developed parts of the swamplands of the Betsimitatatra, to the west (Callet 1981: 238, 275–276, 282, 297). Rice cultivation was practiced during two seasons: *vary aloha* (“early rice”), an off-season rice, was planted in winter (dry season), while rice of the main season, *vary vaky ambiaty* (“rice [planted] when the *ambiaty* tree blossoms,” was transplanted in summer, at the start of the rainy season.

The first European travelers who reached the Highlands were astounded to discover terraced rice fields and the care that was taken over these fields. In Hancove [Imerina], Mayeur (1777) noted the “considerable” amount of work invested in rice cultivation: tillage with spades was complemented by zebu trampling; he also noted the water irrigating the fields, “via conducts.” This water “comes from a vast tank . . . which is always located in the vicinity of each village” (Mayeur 1913: 151, 159). Here one perceives the efforts already made, under the king’s direction, for the development of rice fields. One exemplary king, the head of a hydraulic state on the Malagasy Highlands, was Andrianampoinimerina, the successor of the ruler Mayeur met; Andrianampoinimerina, whose name signifies “the Lord whom Imerina desires” (late eighteenth–early nineteenth century), has been admirably portrayed in the *History of the Kings*. He mobilized his population to build dikes and agricultural works, according to a schema which recalls the mythical “Asian mode of production.”¹²⁰

The Merina state underwent transformations during the eighteenth century that were partially induced by external threats which its rulers may have chosen to exploit, such as the razzias launched by the Sakalava in the Highlands in order to acquire cattle and slaves. These transformations, initiated during the previous centuries, would in future be marked by sovereigns determining where their various subjects would be allowed to settle, and by great works linked to rice cultivation, such as the building of dams and the digging of canals. The Merina king divided the new rice fields, reclaimed from swamps, among farmers. He also had “spades distributed to all classes of the population” and invited everyone to cultivate his land (Callet 1981: 730, 732, 802). The *History of the Kings* clearly expresses the divinization of the king, and that of rice, linked to the king:

Rice and I, we are one. No one is equal to me, but rice . . . Rice is God . . . Rice is my friend and God’s friend. Rice is life. (Callet 1981: 746, 761)

The kingdom itself is viewed as a rice field extending to the outermost borders of the earth: “The sea,” as Andrianampoinimerina purportedly said, “is the limit of my rice field.” In Imerina, the offering of the first rice harvest is called *santa-bary*, from *santatra*, a loanword from the Malay *santap*, “to eat (for a prince or a king),” *santapan*, “royal meal” (Wilkinson 1932, 11: 385).

As G. Rantoandro (2002) points out, royal edicts and the accompanying divinization of rice recall events in Java in the kingdom of Mojopahit, where the king distributed agricultural implements and proclaimed as guilty anyone leaving a rice field uncultivated, or opposing the settlement of new pioneers. For Java, D. Lombard writes of “rice cultivation by divine right” (1990, 111: 15ff.). Considering the framework of the

¹²⁰ This model suggested by Wittfogel has been largely called into question by research.

symbolic system associated with royal power, parallels between the Merina kingdom and Mojopahit probably result either from the resurgence in Imerina of ideas brought by Javanese immigrants, or from people influenced by the Javanese beliefs held by the rulers of Mojopahit.

The Introduction of New Cultivated Plants

Fresh Indonesian arrivals during the second millennium are probably responsible for introducing new cultivated plants. The introduction of new terms for plants which were already present on the island, such as *fontsy*, “banana,” *taho*, “taro,” and *fary*, “rice,” has been noted above. By contrast, the origin of sugarcane in Madagascar is uncertain. It is unlikely that sugarcane was brought in by the first Austronesian migrants. The Malay word *tebu* (< PAN **CebuS*, “sugarcane”) is unknown in Madagascar (although it may have given rise to the word *trembo*, “sperm,” via the Comorian language; see above). As previously noted, sugarcane is called *fary* in Madagascar, from the PMP **pajey*, “rice plant, unhusked rice.”¹²¹ The denomination *fary*, “sugarcane,” is included in Houtman’s lexicon (dated to the early seventeenth century). Domenichini-Ramiaramanana has argued that this shift in meaning may result from the fact that “sugarcane wine replaced (the forbidden?) rice beer” (1988: 203). The taboo on alcohol applies to heavenly princesses and mermaids in Malagasy mythology, and to Indonesia’s celestial nymphs. This forbidden alcohol, which was associated with the western world and death – whereas the princesses were linked to the east and to life – would have been primarily rice alcohol (Ottino 1983: 360–361; Beaujard 1991: 416–417, 444). This interpretation, however, is far from solving the problem of the shift in meaning of the word *fary* for sugarcane.

Moreover, the small Indian civet (*Viverricula indica*), an animal belonging to the Viverridae family and originating in Southeast Asia and South Asia, was introduced during the second millennium, perhaps for the production of musk (Goodman 2013).

The arrival of new populations during the thirteenth and fourteenth centuries reflects Madagascar’s increasing insertion into Indian Ocean networks. This process would be further enhanced during the fifteenth century, paralleling internal developments based, not only on advances in wet rice cultivation on the eastern and north-western coasts and in the Highlands, but also on progress made in stockbreeding along the western coast. Rice cultivation fostered demographic growth, which in turn spurred the formation of highly hierarchized kingdoms. Long-distance trade also played an increasing role, with the development of a slave trade from the Highlands toward the trading ports of northwestern Madagascar and other Indian Ocean regions.

¹²¹ P. Simon (2006: 246) derives *fary* from **paren*, “bamboo” (Maanyan *pareng*), without explaining the disappearance of the final *-ng*. The existence of this term may have facilitated the transfer of *fary* to sugarcane.

PART III

From the Globalization of the
Afro-Eurasian Area to the Dawn of
European Expansion (Fifteenth and Early
Sixteenth Centuries)

Introduction

The extent of sea is small between the coast of Spain in the west and the shores of India in the east. We are not concerned here with actual Spain, but with Further Spain, which is Africa. Seneca asserts that one can traverse that sea in a few days if the wind is favorable.

(Pierre d'Ailly, *Compendium Cosmographiā*, 1412, ch. 7)¹

I have often before spoken of a sea route from here to the Indies, where the spices grow; a route shorter than the one which you are pursuing by way of Guinea . . .

I could [demonstrate this] by using a sphere shaped like the earth, but I decided that it would be easier and make the point clearer if I showed that route by means of a sea chart.

(Paolo dal Pozzo Toscanelli, Florence, June 25, 1474)²

Everything we undertake is for the sake of money, and we are all led by desire for gain.
(Poggio Bracciolini)³

Whoever is lord of Malacca has his hand on the throat of Venice.
(Tomé Pires, 1944: 287)

Starting in the 1330s, the Afro-Eurasian area experienced demographic decline and a trade recession. This period was also marked by major political crises. After six or seven decades of recession, contacts once again increased among the Asian, African, and European continents, spurred by a demographic upsurge. New economic growth was triggered not only by China's rebound, but also by the rise to power of Europe, the expanding Ottoman Empire, and the rapid development of large Indian states and Asian city-states such as Malacca, Calicut, and Hormuz.⁴ Throughout the world-system, exchange networks grew more extensive and increasingly complex, and states became

¹ The writings of Cardinal Pierre d'Ailly played a great role in Christopher Columbus's plan to seek a passage to India; Columbus had annotated a copy of the *Imago Mundi* (1410).

² Letter written by the Florentine physician and astronomer Paolo dal Pozzo Toscanelli, to Fernam Martinez de Roriz, canon in Lisbon and confessor of King Afonso V of Portugal (Fuson 1997: 147). Toscanelli had corresponded with Christopher Columbus at about the same time. S. Gruzinski has recently observed that "Aristotle himself highlighted the fact that it was theoretically conceivable to reach India by taking a western route" (2010: 105).

³ Quoted by Brady 1991: 151. Poggio Bracciolini (1380–1459) was the secretary of Pope Eugene IV (1431–1447) and chancellor of Florence from 1453 to 1458.

⁴ Relying on data concerning Europe, China, and Southeast Asia, V. Lieberman (2003: 103, 251, 385) argues that a global warming episode occurred between 1470 and 1560, fostering agricultural progress. While agricultural conditions after 1400 were less favorable in northwestern Europe, Russia, China, Japan, and continental Southeast Asia than conditions prior to 1300, they were better than they had been during the

better at mobilizing resources and labor forces. Between 1400 and 1500, according to J. N. Biraben's estimates (1979), the population of the Ancient World rose from 375 to 476 million. But the fourth cycle of the world-system was not merely an extension of previous cycles. A key fifteenth-century novelty was a specifically European dynamism, one that would lead to the discovery of the Americas. One may agree with C. Grataloup (2010: 116) that "the fourteenth century was the final stage of a former [type of] globalization": although China was still the main power of the world-system during the fifteenth century, the deployment of capitalist practices in Europe prefigured the modern period, which would begin during the sixteenth century.

The Chinese Ming dynasty undertook a material and ideological reconstruction of the state under Hongwu's reign (1368–1398). This revival led to the success of Emperor Yongle's reign (1403–1424). "The Ming bureaucratic apparatus, heir to a long tradition, reveals a level of sophistication equalled by none other in the world at that time" (Kerlouégan 2009a: 205). However, autocratic tendencies increased under Yongle. The emperor thus relied on a group of palace eunuch-servants in order to bypass central government agencies. Agriculture flourished, and the empire counted 65 million inhabitants in 1400. The metal industry and textile and porcelain manufacturing sectors also grew significantly. After an attempt to use paper money failed, new bronze coins were issued; moreover, despite government reluctance, silver became increasingly vital to the Chinese economy. Continuing the significant efforts undertaken on the Grand Canal, huge urbanization works were initiated at Beijing; this city became the capital of the empire in 1421, and the expression of Yongle's dreams: the emperor wanted to become a new Kublai. He ensured Chinese control over the oases of Central Asia, and launched armies in Manchuria and northern Vietnam.

In contrast with its stance during the second half of the fourteenth century, China was now open to cultural influences and trade, but it did set the terms of exchange, as shown in its strictly regulated trade revival with Japan. Yongle's reign marked the peak of the tributary system, demonstrated by his sending of six great expeditions led by the Muslim admiral Zheng He (1405–1422) to Southeast Asia and the Indian Ocean (a seventh expedition would be launched by Emperor Xuande in 1431). Some of these expeditions reached Hormuz, Aden, and even Malindi, in East Africa. They aimed primarily at ensuring the suzerainty of the Chinese emperor over the various regions of the world, and at constructing a Chinese order, at times through violence, as shown by Chinese interventions in Sumatra and Sri Lanka. However, unlike later European expeditions, these did not aim at establishing economic domination by military means (Wong 1997: 148). Paralleling these naval expeditions,⁵ ships belonging to private traders sailed to Southeast Asia and beyond. Zheng He's expeditions partly explain the increasing

fourteenth century. One observes sustained demographic growth and economic expansion after 1400 (Lieberman 2003: 111). S. Giralt *et al.* (2004) note increased rainfall at Lake Issyk Kul around 1400, along with an increase in solar activity. Climate, however, was not the only factor behind the global developments observed.

⁵ J. Needham has argued that Chinese fleets sailed around the Cape of Good Hope, while other fleets may have reached Australia and America (1971: 489, 494–503, 540–553). There is no evidence for these various contentions.

presence of Chinese ceramics in the Indian Ocean at this time. Note that the fleets' crews appear to have been authorized to sell ceramics and silk privately (Zhao 2015b).

In 1433, for various reasons (Mongol threats, the expeditions' excessive cost, and diminishing Chinese internal resources), China withdrew – at least officially – from maritime routes. The state discouraged foreign merchants from coming and prevented the Chinese from trading in the southern seas. But commercial and cultural exchanges continued between China and the rest of Asia,⁶ especially with the Ryūkyū Islands and Malacca, and also via land routes toward the Gulf of Thailand or Yunnan (and Burma); Chinese communities flourished everywhere in Southeast Asia and even in the Indian Ocean. The so-called “Japanese pirates” mentioned throughout this century along the coasts of eastern Asia were in fact half Chinese. China's official withdrawal must be understood within the general framework of the empire's decline, noticeable as early as 1427, when the Chinese were forced to leave Vietnam. Attacks by nomads increased between 1438 and 1449 (even the emperor was taken prisoner following a Mongol raid in 1449); these attacks were motivated mainly by trade shortfalls at the borders between China and the steppes. While the decline of Chinese foreign trade after 1433 is in need of qualification (Hobson 2004), the empire's internal difficulties were real. They were marked by a worsening financial situation, due to diminishing resources and increasing military expenditures. The state had to stop issuing paper money in 1435. It was then forced to rely on silver, even for tax collection, and a “silver famine” struck China, Japan, and other Asian countries during the mid-fifteenth century, probably hindering economic growth. Chinese society produced no further innovations, and China experienced a decrease in agricultural and industrial production at this time. The country was affected by famines, epidemics, and revolts, all linked to seizures of land by great landowners, as well as global climatic cooling which struck around the middle of the fifteenth century (this worldwide cooling can be correlated with a decline in solar activity, called “the Spörer minimum,” *c.* 1460).⁷ The global cooling also resulted from intense volcanic activity, marked by the explosion of Kuwae Island (Vanuatu) in 1452; ice cores and tree ring records show its effects across the globe.

It is probably significant that the Ming state discouraged long-distance private trade precisely at the time when in Europe merchants were exerting an increasing influence on emerging nation-states, and industry was using multiple innovations (Mielants 2007: 69). A capitalist system thus developed in the West, stimulated by rivalries between Genoese and Venetians, Portuguese, and Spaniards, in their respective quests for gold and spices.⁸ Noticeable already during the late fourteenth

⁶ J. Kerlouégan (2009b) correctly presents a Chinese fifteenth century “largely open to external influences” (see below).

⁷ Quinn 1992; Grove and Chappell 2000; Burroughs 2001: 294; Crowley 2000; Esper *et al.* 2002. One observes a desiccation of the oases in the Lob Nor region and movements of populations in Central Asia.

⁸ According to Braudel, only Europe was able to ensure the development of “true capitalism,” which he sees as emerging in Japan, but failing in Africa and in Asia, although he recognizes some forms of capitalism in these two continents (2002: 581ff.). He argues that “capitalism has been *potentially* visible since the dawn of history” (1984, III: 620). Braudel sets three conditions for the emergence of capitalism: a strong market economy, upon which a capitalist class can rely, with this class at the same time circumventing this market economy by developing monopolistic practices; a society which fosters the accumulation of capital and its transmission; and growth in long-distance trade, which is “the only doorway to a superior profit level”

century,⁹ the European revival was founded upon four economic sectors – agriculture, industry, trade, and finance – as well as upon a process involving statebuilding and cultural development.

Advances in agriculture included both a reduction in summer fallow (replaced by the cultivation of legumes)¹⁰ and an extension of animal husbandry, which had the double advantage of being well adapted to the lack of labor force and providing manure (Mazoyer and Roudart 1998: 319). The Mediterranean countries made improvements in viticulture and olive growing. Everywhere, advances in agriculture underpinned demographic growth and urban revival. Agricultural intensification was not unique to Europe; it could be seen in other regions of the world, brought about by the development of markets and processes of statebuilding (and later by demographic pressure).

Starting in the thirteenth century, Europe experienced a growing system of inter-related cities, characterized by a symbiosis between political classes and private entrepreneurs (Mielants 2007). Two centers flourished, one in Italy (including Venice, Genoa, Florence, Milan, and Naples), and the other in northern Europe (Bruges and Ghent), where the textile industry made Flanders “an unrivaled industrial region” (Braudel 1979, III: 82). Northwestern Europe seems to have been relatively more urbanized than Italy, which was more affected by plague epidemics (in 1470, 34 percent of the population of Flanders and Holland was urban) (Boucheron and Loiseau 2009: 675). While at that time Bruges was the most prominent port, by the end of the fifteenth century, it had lost its commercial privileges to the benefit of Antwerp. A textile sector also prospered in Italy. Its sericulture and silk industries thrived, partly thanks to artisans from the Byzantine area, and to German weavers who “streamed to Tuscany” (Arnoux 2009: 753). The flyer wheel, developed by the end of the fifteenth century, spread rapidly throughout the industrial regions.¹¹ Metallurgy progressed in Lombardy, the Rheinland – in smithies using hydraulic power – and later in the Liège region during the second half of the fifteenth century, with the development of blast furnaces that produced cast iron, associated with refineries, “in which pig iron was transformed into wrought iron or steel.” This “Walloon process” was a significant step forward toward a “modern corporate structure” (Arnoux 2001: 449), and this metallurgical sector in northwestern Europe saw an expansion of wage labor. In fact, Arnoux (2009) points to overall progress in wage labor in Europe at this time. Industry thrived thanks to an often low-paid labor force, and the employment of young women and children (some sectors, however, offered higher wages for skilled manpower). In addition, home-based work progressed in regions that were economically active (Braudel 1979, III: 276ff.).

(1984, III: 535). While one has to acknowledge European breakthroughs in the building of modern capitalism, it is impossible to accept Braudel’s Eurocentric assessments of the conditions prevailing in Africa and Asia (cf. Goody 2007: ch. 7).

⁹ One thus notes increased trade between Venice, Egypt, and Syria.

¹⁰ The introduction of legumes as part of rotation systems had been practiced in Egypt since Antiquity, and it was known by the ancient Greeks (Theophrastus), the Latin agronomists (Columella), the Andalusians during the Middle Ages, and by agronomists during the Renaissance (Mazoyer and Roudart 1998: 318). The technique reappeared in Europe in the densely populated region of the Po valley, and then in Flanders, England, and northern France.

¹¹ The first known picture of this flyer wheel dates to 1480, in southern Germany.

Finance developed along merchant networks between Flanders and northern Italy (the first Bourse had appeared at Bruges in 1309), from centers which accumulated significant capital through industrial growth or long-distance trade, such as Florence,¹² Genoa, and Lucca.¹³ Interest rates fell during the fifteenth century, and this probably spurred growth (Warburton 2003: 79). Moreover, companies specializing in risk coverage for long-distance trade appeared in various cities (Walery 2003). State rulers were induced to borrow money from great merchant bankers, an increasingly common practice in Europe by the thirteenth century; this state of affairs “reflected the inability of these [European] rulers to tax their populations” (Braudel 1979, 11: 463ff.; Wong 1997: 129).¹⁴ Here, Braudel speaks of “European innovation,” a term which is partly incorrect: other political rulers, in Africa and in Asia, made use of their merchants’ wealth. What was indeed new was the scale of the phenomenon and its recurrence in Europe, due to its structural nature. Kings were forced to negotiate the imposition of taxes with the nobility, the clergy, and the urban bourgeoisie; all of whom were represented in Parliaments. It was a situation that led to constant funding difficulties, and the need to borrow from bankers, who were therefore strongly positioned to dictate terms.¹⁵ Private and sometimes public banks developed:¹⁶ during the late fifteenth century, sizeable banking houses were formed (at Genoa, and in southern Germany, with the Fugger firm); these houses financed expanding and competing states (Spain, Portugal, and also France and England, which put an end to the Hundred Years’ War in 1475). Here again, the city-states took the lead: Venice, with the first government bonds (*prestiti* from the Monte Vecchio [1156], and later from the Monte Nuovo [1482]),¹⁷ and Genoa, with the institution of the Casa di San Giorgio, a bank bringing together state creditors (Heers 1961);¹⁸ this bank controlled borrowing, and lent money to the princes of Europe. “Government bonds were transferable, and sold on the market” (Braudel 2002, 11: 521); they were means of payment, and of

¹² In 1494, however, Savonarola drove the Medici out of Florence and the banks of this family went bankrupt.

¹³ Centers of textile production, in particular of silk, often became specialized in finance at a later stage.

¹⁴ During the fourteenth century, the English kings borrowed money from the Lucchese and later from the Florentines. During the fifteenth century, the king of France “Charles VII had his private treasurer, Jacques Cœur; Louis XI borrowed from the Medici in Lyons” (Braudel 2002, 11: 522). The kingdoms of Castile and Aragon both used *jueros*, which were bonds granted or bought on state revenues, and *asientos*, contracts between the king and individuals (Braudel 2002, 11: 522). “This system would have adverse effects during the sixteenth century: renters, concerned only with the purchase of new *jueros*, invested their capital neither in agriculture, [nor] trade, nor industry. Therefore, Spanish production, far from being stimulated, steadily withered” (Zuili 2008: 202).

¹⁵ It was difficult for European rulers to levy land taxes, so they relied heavily on consumption and on commercial taxes. In contrast with Europe, and because its own system of agrarian taxation was efficient, China did not feel the need – except during the Song period – to establish a tax system relying on trade; however, the choice here was also a political one (Wong 1997: 129ff.).

¹⁶ The first public bank was created in 1401 by the city of Barcelona, partly in order to break up the monopoly of the Jewish bankers; at Genoa, la Casa di San Giorgio was founded in 1408. Moreover, the first “pawn shops” appeared at this time in Italy, in order to fight usury.

¹⁷ At the end of the fifteenth century, the majority of shares were owned by a small group of businessmen (Judde de Larivière 2002).

¹⁸ In order to pay the interest on the city’s debt, la Casa di San Giorgio “succeeded in levying taxes on merchandise entering or leaving the port, in obtaining a monopoly on the sale of salt, and in managing overseas outposts” (Heers 2000, www.clio.fr/bibliotheque/pdf/pdf_genes.pdf).

credit. The “capitalist spirit” of the city-states thus slowly imbued the incipient country-states, due to the development of cities and the conditions dictating state expansion.

Paradoxically, over the long term, Europe appears to have benefited from the impact of the Great Plague, which operated like a wave of “Schumpeterian ‘creative destruction’” (Epstein 2000b; Findlay and O’Rourke 2007: 119) and accelerated the changes already taking place – marked by declining feudalism in western Europe.¹⁹ The disappearance of nearly a third of the European population increased the cost of goods requiring significant labor input, thus encouraging innovation. The Venetian Senate instituted protective measures for invention patents in 1474 (Arnoux 2009: 753). Findlay and O’Rourke (2007: 112) note an increase in income per capita in Europe as well as higher real wages (also seen in Egypt and Byzantium) after the Great Plague; relatively high living standards were maintained during the fifteenth century, despite the great demographic increase, since the European population rose from 60 to 81 million inhabitants between 1400 and 1500 (Findlay and O’Rourke 2007: 118).²⁰ Europe benefited from major technical advances, linked to a knowledge revolution resulting largely from the encounter of the West with scientific currents from the Muslim, Indian, and Chinese worlds. Against the backdrop of the Italian Renaissance, as Hobson (2004) correctly observes, scientific and philosophical inflows from Africa and Asia (particularly from China) contributed to Europe’s growing prosperity starting in the twelfth century. Europe adopted external inventions,²¹ improving them through innovation. Invented in China during the eleventh century, the idea of printing using movable type may have been brought in from Central Asia by merchants from Russia or western Asia; it was further developed by Gutenberg during the 1450s.²² Its implementation in Europe, however, was the result of “numerous different innovations: precision engineering of presses; the production of metal alloy for the type; a viscous and indelible ink; and a strong paper, constant in quality” (Arnoux 2009: 754). Printing was, of course, a true revolution in communication, which would pave the way for the spread of knowledge and that of humanist philosophy. “By 1500, between 6 and 15 million books had been published, in 40,000 separate editions . . . : knowledge was no longer confined to the spheres of the Church and the courts” (Brotton 2002: 78, 82). At the same time, it is significant that these publications often used vernacular languages. The development of printing, as well as that of gun manufacturing – originally another Chinese invention – was crucial to Europe’s building of competing states. While the textile sector also benefited from Chinese inflows between the twelfth and fourteenth centuries (see above), Europe made ongoing improvements, with the help of various labor organizations: this encouraged work productivity, and offered an attractive and varied range of products (Brotton 2002). The spritsail was another

¹⁹ In contrast, feudalism would later develop in eastern Europe from the fifteenth century onward, alongside a rise in trade with northwestern Europe, which led to a process of “peripherization” of eastern Europe.

²⁰ J. Goldstone notes wage growth during the second half of the fifteenth century, within a context of relatively stable prices (2008: 24).

²¹ At the same time, “the concept of Europe” was probably born during the Renaissance period (Brotton 2002: 34).

²² As V. Lieberman points out (2003: 79), broader literacy in fact characterized the whole world-system, which also experienced increased monetization and more complex commercial and cultural exchanges at this time.

Chinese inflow dating to the fifteenth century²³ (Needham also mentions the horizontal windmill, but this windmill probably originated in Iran). According to J. Needham (1970: 157), the “Tartar” slaves (Turco-Mongolians) who arrived in Italy during the first half of the fifteenth century contributed to the spread of certain techniques. Exchanges with the Muslim world were made through the Byzantines, and via Egypt or the Ottoman Empire. Arabic-speaking people in Europe may have contributed to these exchanges. Copernicus thus became aware of the works of the astronomers aṭ-Ṭūsī and Ibn ash-Shāṭir (Saliba 2007: 193ff.). Other influences arrived via Indian Ocean routes. The Portuguese caravel, appearing around 1430, resulted from technical blends of various origins: it employed a stern rudder of Chinese origin, and several masts combining lateen and square sails (the term “caravel” itself derives from the Arabic *qārīb*) (Hobson 2004: 141).

Burgeoning trade, which underlay the emergence of European capitalism, was inseparable from progress in maritime transport. The political role of King João I in Portuguese expansion has often been noted, as well as that of his son, Prince Henry the Navigator (1394–1460), who built an arsenal at Sagres (today, however, one tends to relativize his influence: “Between 1415 and 1460, Henry in fact supported only a third of the expeditions that we know of” [Markovits and Subrahmanyam 2009: 607]). After the capture of Ceuta (1415), in Morocco, Portugal launched increasingly remote expeditions along Africa’s coasts, discovering Madeira (1418), the Azores (1432), the Rio de Oro (1436), and Guinea (1444),²⁴ a progression noted in a bull by Pope Nicolas V in 1455. The aim of the Portuguese (and of the merchants accompanying their advance) was to bypass the Muslim states of northern Africa and the Europeans trading with these states,²⁵ and to go and fetch gold and slaves on the Atlantic coasts, dealing directly with

²³ A spritsail appeared in Europe during the first half of the fifteenth century (Needham *et al.* 1971: 610–611). A square spritsail carried on a bifid spar, probably influenced by a type of sail used in the Indian Ocean, had been known in northern Europe during the previous century (this can be seen on a seal from Kiel, 1365; Needham *et al.* 1971: 615).

²⁴ The merchant F. Gomes was granted a monopoly over the exploitation of the Gulf of Guinea for a period of five years (1469–1474) (Hirsch and Potin 2009: 95). For G. Arrighi (1994: 121), expeditions along the West African coast developed only from 1450 onward, when the gold:silver ratio increased. The increase in this ratio certainly provided a stimulus; however, the expeditions had started earlier. In the islands (Azores, Madera, Cape Verde), the Portuguese created plantations (of sugarcane, especially) worked by a servile labor force, which served as a “model” for future exploitations in the Caribbean (Findlay and O’Rourke 2007: 146). It is true that the first major phase of Portuguese expansion during the fifteenth century occurred from 1441 onward. The accession to the throne of King João II (1481–1495) started a second phase of exploration and expansion (Hirsch and Potin 2009: 94).

²⁵ States of the Marinids, and later of the Wattasids (1472) from Fez, in Morocco, of the Wahabis from Tlemcen, and of the Hafsids from Tunis. The center of gravity of European activities tends to shift westward at this time (Valérian 2009: 78). Braudel (1946: 12) compares the northern African cities of this period with the Italian republics of the thirteenth century. Genoese, Catalans, Marseillais, and Venetians visited these cities as merchants as well as mercenaries, attracted by Sudanese gold arriving via the trans-Saharan trade. “As early as the middle of the fifteenth century, the Genoese traveled as far as Sidjilmessa and Touat” (Braudel 1946: 14). Morocco’s decline under the Wattasids corresponds to the settlement of Iberians along the Moroccan coasts, on the one hand, and to the eastward shift of trans-Saharan routes to the east, on the other, which ensured the prosperity of Tlemcen and Tunis (Garcin 2000: 304; Hirsch and Potin 2009: 98). Note that the Genoese invested not only in international trade, but also in land estates (for example in southern Spain) and in the financial sector (Valérian 2009: 80).

merchants from the Mali Empire and trading with the expanding African states. On the Gold Coast, Akan kingdoms were formed at the beginning of the fifteenth century. Further east, Benin, constituted during the fourteenth century in connection with a dynasty from Ife, became a significant kingdom during the fifteenth century. In 1486, the Portuguese entered into a commercial arrangement with this kingdom. The arrangement included a delivery of guns, which would later upset West African power relations (Hirsch and Potin 2009: 106). Upstream on the Niger River, the Yoruba kingdom of Oyo developed at the end of the fifteenth century. The emergence of other, smaller states shows increased connections between savannah and forest lands – starting as early as the ninth and tenth centuries (see above) – as well as trade with the maritime provinces of the Mali Empire.²⁶ As already observed, the Dyula settled at Begho during the late fourteenth or the early fifteenth century; they contributed to progress in both gold exploitation and slave-dependent modes of production, facilitating the birth of new states to which the Dyula could “bring their intellectual and ‘spiritual’ tools,” linked to their Islamic knowledge (Terray 1995: 52, 73, 74–75, 91–92, 99).

The Portuguese settled on Arguin Island (Mauritania) in 1445, and later built a fort at Elmina in 1482 on the Gold Coast. However, they failed to divert most of the gold trade toward the coasts.²⁷ The share they took does not explain the gold famine observed in the Mediterranean (and in Europe), which was primarily due to trade expansion in the world-system, where Europe’s share was growing.²⁸ The land routes of the African interior remained preeminent, toward the Songhay Empire,²⁹ the Hausa city-states,³⁰ Bornu, and northern Africa.³¹ While the Muslims controlled the

²⁶ One may speculate that relations between north and south and the use of cowries as currency in the Niger valley may have fostered the dissemination of a currency using a type of shell from the Atlantic coast, in Benin and further east. Other shells, called zimbo, were used for exchanges in the kingdom of Kongo and neighboring regions (Hogendorn and Johnson 1986: 18–19). Kongo was also in indirect contact with the East African coast through Angola and the Zambezi valley, whence the use of shells may have spread.

²⁷ I disagree with F. Braudel when he writes of an “economic capture of the Saharan traffic” by the Portuguese, who “redirect much of the precious metal produced by Sudanese gold prospectors for their own benefit” (Braudel 1946: 13). Mielants (2007: 153) also points to the decline of Sijilmāsa and of the northern African states, linking it to a decrease in the gold trade. Gold from Sudan was still arriving in northern Africa at the end of the fifteenth century, but in reduced quantity. This situation was also due to increased Egyptian demand and to security problems in the African interior. In fact, as previously noted, there was a relative “shift” of the trans-Saharan trade to the east. By 1500, the Portuguese were able to acquire – briefly – 500 or 600 kg of gold, but four times as much gold was being exported via the trans-Saharan route (Pacey 1990: 71).

²⁸ It is true, however, that at the beginning of the sixteenth century the Portuguese used part of this gold in their Indian Ocean trade, thus taking it away from the European exchanges (Braudel 1946: 14). Gold helped balance Europe’s trade with Asia: toward 1500, 1750 kg of gold traveled from Europe to the East; this was “a quarter of the total European production” (Pearson 2003: 84).

²⁹ The Mali Empire lost control over the trans-Saharan trade, first to the Tuaregs, who occupied Timbuktu in 1433, and later to the Songhay Empire, formed by Sonni ‘Alī Ber (1464–1492). “Attempting to repeat the deed of magnificence of Mansa Musa, the Askīya Muhammad [ruler of Songhay] went to Mecca in 1496–1497, carrying 300,000 dinars and accompanied by 800 horsemen” (Hirsch and Potin 2009: 104).

³⁰ The Hausa city-states, which flowered from the middle of the fifteenth century on, were fortified in order to resist attacks by the state of Bornu and the Songhay Empire. While the elites of these cities (which welcomed Muslim scholars) converted to Islam, rural populations remained largely pagan (Coquery-Vidrovitch 1993: 132).

³¹ The Venetian Alvise da Ca’ da Mosto, who traveled in western Sudan in 1455–1456, relates: “Gold from Mali is divided into three parts: the first part is carried to Cairo and Syria by caravans; the second goes to

networks, the Jews were also present, acting as “intermediaries between the Saharan and Maghreb segments of the great gold trade”; Malfante thus mentions their role at Tamentit in a letter addressed to the Genoese firm Centurione in 1447 (Fauvelle-Aymar 2013: 293).

In contrast, quick profits could be made in the slave trade (Devisse 1985: 727–729). The Venetian Alvise Cadamosto recounts that he exchanged seven horses for 100 slaves in southern Senegal in 1456. Eighty thousand slaves are said to have been carried to islands in the Atlantic and to Europe during the fifteenth century; a total of 155,800 were traded between 1450 and 1521 (Lovejoy 2000: 37).³² In exchange for these slaves, the Portuguese offered textiles and goods bought in northern Africa. The Portuguese also successfully took part in the African slave trade already in existence when they arrived. It appears that slaves worked for gold in places such as Benin and the Akan country, or in copper extraction, as well as in agriculture (Niger River valley) and in the production of salt (Teghaza, in Sahara) (Lovejoy 2000: 35). The number of slaves leaving the Atlantic coast from 1450 to 1600 amounted to only one-third of the exports conducted through the Sahara, the Red Sea, and East Africa (Lovejoy 2000: 41).

Increases in the price of precious metals provided an incentive for Portuguese expansion. The Portuguese project was not just an economic one, however: the rulers dreamed of bypassing Egypt and freeing Jerusalem from the Muslim grip, by allying themselves with the kingdom of Prester John, believed by the Europeans to be located in India (as shown on the Genoese map of 1457) before it was discovered in Ethiopia (Markovits and Subrahmanyam 2009: 609).³³ “In 1318, already, an “English” Dominican, Guillaume Adam (in fact Adam was French), had suggested an attempt to defeat the Islamic powers by attacking them from the rear via the Indian Ocean and the Red Sea, then retaking Jerusalem. The project had been read and commented on in most of the European courts” (Bouchon 2004: 36). Adam also suggested building an alliance with Ilkhanid Persia.

In the Mediterranean, the Italian city-states controlled trade, as did Barcelona and Valencia, thanks to an efficient alliance between the industrial and merchant classes, and the state. It was of course in the interest of states relying on trade to promote it, by force if necessary, and to encourage monopolies. Moreover, the merchant and political elites were closely interwoven. These cities combined production, banking activities, and trade. The entrepreneurial freedom and the means granted to the capitalist class in republics such as Venice and Genoa as well as in aristocratic regimes such as that of

Timbuktu and from there to Tunis via Tuat; the third part is carried to Oran, Fez, Marrakech, and Arzila, where the Italians acquire it” (Ashtor 1971: 28). Lovejoy (2000: 25) describes six different, more or less interconnected routes through the desert. The situation remained mostly unchanged, even after the Portuguese settled along the Gold Coast. At the beginning of the sixteenth century, caravans carried gold from western Sudan to Egypt. On these trade routes, see also Devisse 1972: 388ff.

³² The slave trade increased during the fifteenth and sixteenth centuries along the trans-Saharan routes, from the Songhay Empire and the Bornu. Leo Africanus emphasizes Timbuktu’s opulence in 1526. In fact, the competition engendered by Portuguese activities along the coasts led to growth in production and trade, and to increasing violence.

³³ The myth of a Christian kingdom located “beyond Persia and Armenia” developed from the mid-twelfth century onward.

Florence³⁴ cannot be found to the same extent in the cities of Africa and Asia. There are a few exceptions: Ceuta, which became a republic prior to the Portuguese occupation in 1415; Hormuz; Calicut and other Indian port cities; and Malacca. Another difference from Europe was that these African and Asian cities never based their strategies on violence, although some merchant princes had no qualms about resorting to it and although piracy was endemic in regions such as India's western coast, as noted by the Persian ambassador Abd al-Razzāq and the pilot Ibn Mājid. The merchants of these European city-states "imposed respect for their *fondue*, the sale of their products and even the exchange rate of their currencies on the Muslim states" (Rosenberger 2000b: 120).

The expansion of Italian cities such as Venice, Milan, and Florence transformed them into macro-states following the treaty of Lodi in 1454,³⁵ putting an end to a long period of conflict among them. During the first half of the fifteenth century, Venice's budget was far bigger than that of France, although France's population was ten times greater (Braudel 1979, 111: 98). While extending its territory, Venice remained a maritime power: between 2,000 and 3,000 people worked in the Arsenal at the turn of the sixteenth century (Goody 2007: 202). While Genoa controlled the Ligurian coast and the outposts of Chios in the Aegean Sea as of 1346, Pera (Byzantium) as of 1261, and Caffa, in the Crimea, the Genoese capitalist class chose a logic of non-territoriality, with accumulation founded upon control over means of payment³⁶ (a logical system that would be even more pronounced during the sixteenth century). During the early fifteenth century, this system was facilitated by the development of checks and letters of exchange. It was a movement that relied upon an extensive network of traders and correspondents.³⁷ Innovations – in particular those in Genoa – in the fields of finance and commerce played "a key role in the rise of Portugal and Spain" (Porter 1995: 410), countries where Genoese bankers were strongly represented.

Another institutional innovation turned the Italian city-states into models for the capitalist states of ensuing centuries: the balance of power between political entities was

³⁴ W. Sombart (1902) took the example of Florence and placed the emergence of "a capitalistic spirit" during the fourteenth–fifteenth century in Italy; he relied especially on testimony given by the philosopher Leon Battista Alberti, who praised money and revealed the value of time.

³⁵ Epstein 2000a: 287; Hansen 2000c: 602. The treaty of Lodi first involved the Republic of Venice and the Duchy of Milan. It was later ratified by Florence. In 1455, Pope Nicholas V and the king of Naples Alfonso V joined the newly formed "Italian League for the peace and tranquillity of Italy, and the defence of the Holy Christian Faith" (Boucheron 2009b: 58).

³⁶ On the two types of logic associated with capitalist development represented by the cities of Venice and Genoa, see G. Arrighi 1994. F. Braudel has already written that Genoese capitalist development was "much more modern than that of Venice" (1979, 111).

³⁷ As early as 1410, the bill of exchange was endorsed, thus "significantly widening the possibilities of compensation" (Waléry 2003): "the beneficiary signs it and transfers it" (Braudel, 1979, 1: 415). Bills of exchange progressively became negotiable instruments of credit and currency papers. Genoa introduced another innovation: the invariant unit of account. "In 1447, a law was passed requiring all business accounts relating to currency exchanges to be held in gold coin of fixed weight, a unit of account which soon became the *lira di buona moneta*" (Arrighi 1994: 113). At the same time, the fifteenth century saw "a progressive development of true fairs of payment," enjoying a busy trade in bills of exchange: at Medina del Campo in Spain; Lyon, Besançon, in France; and Plaisance, in Italy (Waléry 2003).

partially founded on the implementation of an active diplomacy, with permanent ambassadors, which made it possible to minimize the costs of protection.³⁸ The efficiency of a city such as Venice was also based on the existence of a network of agents and correspondents extending as far as Persia and India,³⁹ and on the formation of cartels.⁴⁰ The state maintained close links with influential merchant families and the great Venetian banks (Vallet 1999: 115).

Venice's primary contact was with Egypt, the richest of the Muslim states under the Burjī sultans, who took over the spice trade from 1429 onward. The Italian city bought spices, cotton, and silk in exchange for textiles, glass beads, mirrors, copper, gold, and silver.⁴¹ Most of the spices were carried via Egypt, although the route via Tabriz had opened in 1404; that year, "the Venetian convoy could again load in Trabzon quite a rich cargo: 20 tons of pepper, 20 tons of indigo, [and] 7 tons of *cannell*" (Inalcik and Quataert 1994: 316). A treaty had already been signed in 1403 between Venice and the Ottoman Empire. Of 600 to 700 tons of spices bought yearly by the Latins at Alexandria and Beirut, Venice captured at least 500 tons (Inalcik and Quataert 1994: 316). Increasing quantities of raw cotton were being imported from Egypt and Syria; this, along with the concomitant exportation of Italian and Flemish textiles, marked the relative "peripherization" of Egypt and the Levant (Findlay and O'Rourke 2007: 131). Venice benefited, not only from its access to central European silver and copper, but also from Europe's growing advantage in the manufacture of various types of merchandise (Inalcik and Quataert 1994: 129). In the spice trade, pepper was worth less than cloves and nutmeg. "A kilo of pepper cost 1–2 grams of silver at the production point [Malabar coast], 10–14 in Alexandria, 14–18 in Venice, and 20–30 for the European consumer," but "the Venetians made a profit of only about 40%" due to transport costs and high tax levels" (Pearson 2003: 83). The volume of imported pepper rose from 1,000 to 1,200 tons per year between 1400 and 1500. By contrast, the volume of cloves imported into Europe grew from 6 to 52 tons, and that of nutmeg, from 1.5 to 26 tons (Reid 1993b: 11). Their prices were largely higher than that of pepper, and

³⁸ Arrighi 1994: 38–39. Diplomatic networks also made it possible to gather and transmit information; in this way, they reinforced long-distance trade networks (Arrighi 1994). Although he did not belong to an organized company, Niccolò dei Conti "was part of the Venetian momentum toward the Indies" (Bouchon 2004: 24).

³⁹ "Venetian merchant houses had, from the early fifteenth century at least, established a network of correspondents and associated merchant firms stretching from Venice to Aleppo, Baghdad, and Basra, overseas to Hormuz and Diu, and overland to Tabriz and probably Mashed and Samarkand as well" (Barendse 2000: 187, following Cessi 1957). Clearly, the Venetian networks extended beyond the Mediterranean. On the Venetians in Syria, see Vallet 1999.

⁴⁰ The *maona* from Aleppo, for example, brought together Venetian merchants (patricians) for the purchase and sale of spices (Vallet 1999: 117–118).

⁴¹ New fusion techniques made the extraction of silver from ores in Tyrol and other regions such as Carinthia, Thuringia, and Hungary feasible. Silver exploitation and trade – with Venice and the Levant – were under the control of the Fuggers, a family of German bankers: the 1450–1550 period became known as "Fugger's century" (Braudel 1946: 11). Gold ducats were mostly exported: around 1423, Venice minted a million ducats per year, with "half of it exported to Egypt and Aden, and further to India." According to some sources, the equivalent of one ton of gold was carried to the Levant every year. In 1503, in contrast, Venice sent only 100,000 ducats to Egypt, due not only to declining trade, but also to the fact that the city was now exporting more manufactured goods (Vilar 1974: 121).

Venice controlled over 60 percent of the market (Findlay and O'Rourke 2007: 140). Spices from Asia, however, were primarily consumed in Asia, Arabia, and Egypt, as already noted by Marco Polo.⁴² According to R. Ptak (1999), 60 to 70 percent of the cloves imported by Malacca around 1500 were transported to Gujarat, and only 5 percent of these cloves were carried to Europe.⁴³ Moreover, very high profit margins could be generated: as much as 40 percent at the beginning of the sixteenth century, by transporting pepper from Malacca to China.

Urban expansion and statebuilding were also marked in Europe by progress in universities and advances in knowledge: while there were fewer than thirty universities active in 1378, their number had more than doubled by 1500 (Charle and Verger 2007: 18). These new institutions were often created on the initiative of political powers, in Spain and Portugal, for example. The German world and central Europe opened their first universities at this time. While this progress matched that of the building of states, it happened at the cost of these educational institutions' autonomy, which more or less disappeared during the sixteenth and seventeenth centuries. "While still remaining Church institutions, universities were increasingly under the control of cities and states" (Charle and Verger 2007: 18).⁴⁴

Changes in production; expanding commercial and cultural exchanges; growing individualism; all these were accompanied by significant changes in social behavior in Europe. Along with more widespread monetary practices and the importation of increasing amounts of oriental products (especially spices, porcelain, carpets, and precious stones), new modes of consumption appeared: in eating habits, ways of dressing, and decorating interiors. These new modes were linked to "a personal concern for appearance," which went hand in hand with "an exacerbation of social distinctions" (Schmitt 2009: 775).⁴⁵ The emergence of the watch as personal object in northern Italy and southern Germany signaled a new perception of time; this innovation was made possible by improvements to the mainspring and fusee during the late fifteenth and early sixteenth centuries. The elites invested in works of art, whose exhibition consolidated their power: the fifteenth century saw the flowering of the Renaissance – which began as early as 1300, according to Ghiberti. Well after

⁴² During the sixteenth century, the European demand accounted for only about half of the total volume of Indian exports of pepper to Yemen (Barendse 2000: 193–194). "The spike in spice prices in the second decade of the fifteenth century is suggestive, for it coincides precisely with the Zheng He expeditions," which acquired large quantities of spices (Findlay and O'Rourke 2007: 141). Similarly, the importation of cloves declined in Europe during the 1390s and 1400s, due to increased Chinese demand (Findlay and O'Rourke 2007).

⁴³ Quoted by Pearson 2003: 83. Malacca received five-sixths of the production of cloves.

⁴⁴ While "in theory, no border prevented people from moving, or negated the universal validity of diplomas," multiplying universities and increasing political control hindered mobility (Charle and Verger 2007: 21).

⁴⁵ At the same time, collective referents establishing identity, such as parishes and neighborhoods, remained paramount; guilds developed, and a "fantasized opposition with the other" – the "other" being usually a Muslim (especially Ottoman) or a Jew – was enhanced (Schmitt 2009: 771). This opposition was nothing new: it had underpinned the Crusades and pogroms for centuries. In addition, the "process of individuation" went along with "an increased concern about death" (Schmitt 2009: 779ff.). The creation of "modern individuality," as Schmitt notes, had already been recognized by J. Burckardt (1860) among the peculiarities of the Italian fifteenth century.

Greco-Roman Antiquity⁴⁶ or Tang and Song China, the development of the art of portraiture, and the appearance of the self-portrait – unknown in ancient China – were significant elements in these ongoing changes. Production itself became more individualized: painters now signed and dated their work (Schmitt 2009: 769). The status of artists changed, as shown by the payment of 1,650 gold ducats to Donatello for his equestrian statue of Erasmo de Narni at Padua (Schmitt 2009). In their patronage of both merchant society and the arts, the Medicis in Florence, who had built their fortune upon the textile industry, commerce and banking, best exemplify these rulers who favored the emergence of a creative movement. Developing a system of thought built on the key concept of humanism, the Renaissance encouraged intellectual curiosity, a free “critique of Reason”⁴⁷ and at the same time provided intellectual education based on the humanities and on a rediscovery of the classics. This education was closely linked to the bureaucratic construction of states, to which humanists could provide their services, with well-timed political flair (Brotton 2002: 85ff.). For the Renaissance, culture was the motor of human evolution, with a new freedom of thought that was separate from the Church.⁴⁸ However, the Council of Constance, convened in 1414, marked the end of the Western Great Schism, and gave the Church new strength and apparent solidity – perhaps an illusion, since the Council also pronounced a death sentence (1415) against the priest Jan Hus, chancellor of the University of Prague, whose religious movement heralded that of the sixteenth-century reformers Luther and Calvin. The fifteenth century also saw the flowering of a new concept of spirituality, the *devotio moderna*, in which affectivity played an important role – as was the case in Islam’s Sufi “paths.” The practice, emanating from movements in Holland and the Rhine region dating to the fourteenth century, influenced the monastic and mendicant orders.

“The individuation process” fostered by social transformations was “inseparable from contemporary forms of ‘capture of the world’” (Schmitt 2009: 770); here again China had been several centuries ahead: the oldest printed maps in the world, dated to 1155, can be found in the Chinese book *Liuzhishu*. After the rediscovery of Ptolemy’s *Geography* in 1397 (printed in 1475),⁴⁹ geographical explorations allowed for progress in cartography, as seen in the Florentine school of cartography; the Genoese map of 1457; the mappamundi of the Venetian Fra Mauro (1459),⁵⁰ and, more importantly, the

⁴⁶ See especially portraits from the Fayum (first–fourth century CE).

⁴⁷ Barnavi 1987: 146. The Renaissance rediscovered the Greek and Latin classics, and the first humanists such as Protagoras (fifth century BCE), for whom “man is the measure of all things.”

⁴⁸ The humanistic current was critical of universities, and developed rather independently of them (Charle and Verger 2007: 34). For example, architects and engineers were not trained in universities, but outside them.

⁴⁹ In 1397, Manuel Chrysoloras brought a manuscript in Greek of Ptolemy’s *Geography* to Florence from Byzantium; this manuscript was translated into Latin in 1409 by Jacopo Angeli. However, Ptolemy had never been completely forgotten during the medieval period, as P. Gautier Dalché demonstrates (2009).

⁵⁰ “Between medieval and modern maps,” and a “synthesis of tradition and new spirit,” Fra Mauro’s map of the world made use of the testimonies of travelers such as Marco Polo and Niccolò dei Conti (Palsky 2009: 795). Conti was the first European to locate the islands producing cloves and nutmeg. “Beyond these islands,” recounts Conti (2004: 103), “it is impossible to navigate, because sailors are restricted by the air.” It was under his influence that the Genoese map dated from 1447/1457 mentions these islands. This map refers to the transport of spices from the Moluccas to the western Indian Ocean, and to Kalimantan and

oldest surviving globe,⁵¹ made in 1490 by Martin Behaim, a German merchant and geographer living in Portugal.⁵² America would appear on the Waldseemüller globe in 1507; this globe took into account documents relating to voyages in which the Florentine Amerigo Vespucci had participated (1499–1504), especially the 1500 voyage during which Pedro Alvares Cabral reached Brazil. This new world cartography clearly revealed the will to “capture the world” – in the sense of control over the world – that was characteristic of the Europeans.

It is probably true that political, economic, and cultural developments – as we have described them – “founded a new European identity in the world” (Arnoux 2009: 755). Outside Europe, however, the entire world-system was experiencing major changes which were “part of a capitalist transition” (Reid 1993b: 2). These included an overall increase in production and urban growth; the accumulation of capital; increased monetization of transactions; a boom in trade; demographic growth; a widening use of firearms; and the appearance of more centralized states.

In comparison to Europe, the western Muslim world experienced a decline, as Findlay and O'Rourke suggest (2007: 109) in Egypt, the Levant, Iraq, and western Iran, at least; by contrast, the Ottoman Empire was taking spectacular steps forward.⁵³ In Mesopotamia and in Egypt, the demographic impact of recurring plague epidemics was having disastrous consequences on agriculture, with the abandonment of canals during the fourteenth century leading to a collapse of irrigation systems. During the fifteenth century, the population of the Muslim world rose from 86 to 114 million, despite the decline of its central historic regions: the population grew “thanks to Islam’s land conquests,” in India, Southeast Asia, the Balkans, and Africa (Martinez-Gros 2009: 638, quoting Biraben 2004). Muslim networks extended throughout southern Asia, and D. Lombard has defined the Indian Ocean during the fifteenth century as “an islamized sea,” with Islam viewed in the merchant world as “a confidence criterion, a trade pidgin and a code of good behavior” (Bertrand 2007).⁵⁴ At this time, the system

further on to southern and northern China, following Conti’s teaching (2004: 102). One of the innovations of Fra Mauro’s map is the presence of an island called Cimpagu to the north of Java Major (Kalimantan). This refers to an island of Japan, which thus appears for the first time on a European map. In addition, the courses of the Yellow and the Yangtze Rivers are accurately drawn (Amilhat-Szary 2004: 85–86). The tip of Africa (Cape of Good Hope) is indicated. It has sometimes been suggested that Fra Mauro’s map benefited from a knowledge of Chinese or Korean maps (cf. the “Kangnido map” dating from 1402, which shows the southernmost tip of Africa). The orientation of the map with south at the top may reflect an Arabic influence.

⁵¹ We know that in 1477, Nicolaus Germanus created a world globe for the pope (Palsky 2009: 799).

⁵² As previously noted, “the portolans and the system of rhumbs probably have an Arab origin” (Amilhat-Szary 2004: 62). They may have appeared in Europe as early as the twelfth or thirteenth century (Schmitt 2009: 789; Palsky 2009: 797).

⁵³ While B. Lewis (1982: 229–230) “has pointed out that in the Islamic tradition, the term *bidaa* (‘innovation’) eventually acquired a highly negative connotation, much like ‘heresy’ . . . and that such cultural changes account for much of the technological slowdown of the Islamic Middle East after 1400” (Mokyr 2002: 251), this remark does not apply to the Ottoman world.

⁵⁴ On the spread of Islam in India and Southeast Asia, see also Subrahmanyam and Markovits 2009. S. Subrahmanyam (2005b: 52) rightly points out that A. Wink’s idea (1990) of a hegemony of Muslim networks during the “pre-modern” period shows an erroneous view of the situation in the Indian Ocean. Here, Wink seems to forget that many merchants were not Muslims (“Gujarati *vaniyas*, Tamil and Telugu Chettis, Syrian Christians, Chinese from Fujian,” or Jews from Egypt and from the Malabar coast [Wink

was becoming increasingly sea-oriented – the great majority of the world’s largest cities were ports – and Niccolò dei Conti, writing about India, describes the wealth of some merchants, who owned “forty ships, each of which [is] valued at 50,000 gold pieces” (Conti 2004: 108). The disintegration of the Delhi sultanate gave birth to cosmopolitan merchant sultanates, strongly interested in sea trade, especially in Gujarat and Bengal. These sultanates exported cotton cloth which the West – viewed in a broad sense – paid for with precious metals. The growth of the textile industry in Gujarat allowed Cambay to capture the lion’s share of gold exports from Zimbabwe (Magalhães-Godinho 1969: 254). In addition, the Gujaratis were able to benefit from the changing merchant scene in the Red Sea during the first half of the fifteenth century. Unlike the case in Europe, the demographic debilitation of Egypt and the Levant was longlasting. Agricultural and industrial production was in decline, whereas military expenses were growing. The economic and monetary crisis striking Egypt and the Red Sea led the Mamluk and Rasūlid rulers to take advantage of trade in order to meet their expenses; they did this by giving the “house of the sultan” (*matjar*) a prominent position, and by spoliating the merchants. Exactions by Yemeni sultans against *kārimī* merchants would force the latter to flee to Jeddah, where Indian ships bypassing Aden arrived starting in 1424. Egypt, however, took control of Jeddah in 1425, and in 1429 the Egyptian sultan Barsbay claimed monopoly rights over the spice trade and over the most profitable products. Manipulated and deprived of their entrepreneurial freedom by the political power in place, the *kārimī* at last disappeared as independent merchants, at a time when ships from India were entering the Red Sea (Vallet 2010b: 666).

The militarized agrarian empires of the Deccan region (Bahmani sultanate) and South India (the “Hindu” empire of Vijayanāgara) were themselves involved in trade via merchant communities they favored, composed of Hindus, Jains, and Muslims (Persian Pardeshī, Yemenis, and Indian Māppiḷa). Along the western Indian coast, city-states blossomed in the empires’ interstitial regions. Calicut – the great port for pepper – was the most important of these cities; it was regularly visited by Chinese fleets. City-states, places for social contracts between political elites and traders, saw the development of a kind of merchant proto-capitalism, based on investment in production aimed at export; unlike the European cities, however, the Asian city-states proved unable to influence the great states. “Merchant Republics” were instituted in a few ports: at Basrur, for example, but they remained marginal. While in the empires, merchants were sometimes granted political positions, they remained vulnerable, because the power of the merchant class was not institutionalized (Mielants 2007: 101): the execution of the horse trader and First Minister Maḥmūd Gāwān by the sultan of Deccan in 1481 provides a good example of this fragility. Moreover, unlike Europe’s merchants, the merchants here exerted only limited control over the processes of production, for example in the textile industry. Partially controlled by Vijayanāgara, the Coromandel coast saw an incipient process of industrialization in textile production, and the emergence of great merchant families. Monetization of the economy was also underway. However, the development of “capitalism” – as in the rest of India – was

does, however, mention the Jews]). The significance of the Tamil merchants was obvious in Malacca. Moreover, Islam had various forms and organizations, often in competition with one another; therefore there was no Islamic “monopoly.”

hindered by the extent of a servile working class, preventing an internal market from growing significantly and hampering the search for innovations.

Trade was particularly active in the eastern Indian Ocean, stimulated by commercial exchanges with China under Emperor Yongle. Bengal was a key player in trade: it exported cotton and silk fabrics, as well as rice and sugar, to Sumatra and Malacca, through the port of Sonārgāon. Alongside the Gujaratis, great Tamil merchants were also crucial for trade with Southeast Asia, from the port of Pulicat. Other states such as Pegu (Burma) and Mrohaung (Arakan) belonged to networks which merged in the port of Malacca. Due to the support of the Ming power, the city-state of Malacca slipped out of the suzerainty of the Thai kingdom of Ayuthiā and that of Mojopahit, and acted as a hub between the Indian Ocean and the China Sea. The four “chiefs of the port” (*syahbandar*) representing the four main foreign communities (Gujaratis, Tamils, Javanese, and Chinese) had a genuine political role to play in the city, and the sultan himself, who converted to Islam during the first half of the fifteenth century, took an active part in commercial exchanges (unlike the rulers from Hormuz and Calicut, who did not seem to have been directly involved in trade). At Malacca, merchants enjoyed a relatively privileged position. As in Aden, the state ensured the defense of ships visiting its port, and while the city drew its revenues from trade, it did not levy heavy taxes on merchants. At Malacca and throughout Southeast Asia, expanding trade fostered increased monetization of the economies. The city was in contact with other Indonesian sultanates, especially Pasai in northern Sumatra, and Brunei, in Borneo.⁵⁵ Built along Indian prototypes already described by Ibn Battūta along the western Indian coast during the fourteenth century, these sultanates illustrated the alliances and sometimes a coalescence between the merchant class and the political elite. Their prosperity would contribute to the expansion of Malay as a *lingua franca*. China maintained direct contacts with Malacca and the Sumatranese sultanates. The Javanese kingdom of Mojopahit, whose power depended partially on its privileged relations with China, slowly lost the preeminence it had exerted during the fourteenth century. Western Java was now beyond its control, and the ports along the northern coast – cosmopolitan towns which were largely islamized and also housed large Chinese communities – became progressively independent, with the Muslim merchant elites (Javanese or Javanized) rejecting the old agrarian aristocracies of Mojopahit, in a process well described by the Portuguese chronicler Tomé Pires. The significance of Malacca increased further after 1433, when China suddenly closed its doors to foreign maritime trade.

In the Bay of Thailand, progress in exchanges benefited the kingdom of Ayuthiā, where a sizeable Chinese community lived and took part in numerous missions to China. In addition, Ayuthiā benefited from an intensification of agriculture and the development of industries such as the manufacturing of firearms, of ceramics imitating Chinese porcelain, and of cotton textiles, all of which fostered the building of a more centralized state; this process was also observed in Dai Viet (northern Vietnam) after the expulsion of the Chinese in 1427.

⁵⁵ Annam was also active in trade, as was Martaban.

Trade recovery during the early fifteenth century⁵⁶ was also significant at the other end of the Indian Ocean, along the East African coast, in the Comoros and in Madagascar. Here again, the growth of trade went along with progress made by Islam. Gujarati ships and traders now dominated long-distance trade. A few Swahili merchants ventured as far as India and Malacca. The main Swahili and Comorian cities and Malagasy ports such as Vohemar imported Chinese ceramics: these were brought in by various trade networks, as well as by Zheng He's expeditions, which visited the East African coast as far as the city of Malindi. New trading ports appeared along Madagascar's northwestern coast. They were visited by Swahili and Arabo-Persians, and most likely by Indians and Indonesians as well. These ports, in particular, exported slaves from the Highlands, at the time an area in full transformation.

Regional changes occurred during the fifteenth century. Some were initiated by a sharp climatic deterioration around the middle of this century. The period 1450–1470 saw an overall decrease in temperatures and a weakening of the Indian Ocean monsoon. This resulted in many instances of low Nile flooding between 1459 and 1474⁵⁷ and decreased rainfall in southeastern Africa.⁵⁸ These climatic changes and environmental problems may have initiated the disaggregation of the Zimbabwe Empire, succeeded by the Mutapa, further north, and other entities.⁵⁹ The crumbling of this Zimbabwe Empire coincided with the decline of the sultanate of Kilwa, while at the same time the rival cities of Mombasa, Pate, and Mogadishu grew stronger. The difficulties China was experiencing during the same period, aggravated by this same climate deterioration, have already been pointed out. Globally, however, this climate change had only limited effects on the world-system, which continued to grow, albeit with significant transformations, especially in Europe and western Asia.

In western Asia, the Ottoman Empire now experienced a major phase of expansion starting in 1453, when the army of Sultan Mehmet II took Byzantium, after a siege during which huge cannons were used.⁶⁰ The Ottomans conquered Serbia and Bosnia between 1459 and 1463, took Caffa from the Genoese and subjugated the khānate of Crimea in 1475. They attempted to impose their supremacy in the Mediterranean; while they enjoyed some success under Bayazid II, who succeeded Mehmet in 1481, their fleet later suffered a major defeat at Lepanto in 1571 against a Venetian, papal, and Spanish coalition. The Ottoman success was due to an intensive use of guns and

⁵⁶ While A. Reid (1988) places the start of his "Age of Commerce" in 1450, trade growth goes back earlier. Indeed, Reid gives 1400 as the starting date for the "pre-modern" period in his later text (1993a: 11).

⁵⁷ Particularly low flooding was signaled as early as 1450. M. K. Dhavalikar (2004) has noted famines in India between 1468 and 1475.

⁵⁸ At the same time, the ENSO (El Niño-Southern Oscillation) phenomenon was occurring more frequently in the Pacific Ocean.

⁵⁹ There was no true "empire" of Mutapa, despite what has often been written; rather, there were competing chiefdoms (Newitt 2002: xxvii).

⁶⁰ The expansion started under Mehmet I (1413–1421) and Murad II (1421–1451). Murad II forced the Byzantine Empire to pay tribute, and he won a significant victory in 1444 at Varna, Bulgaria, over a Christian army composed mainly of Hungarians, Poles, and Romanians. Władysław III, king of Poland and Hungary, died in that battle. As for the Italian states, they were not eager to send military support to Byzantium. After the taking of this city, of primarily symbolic significance, the Ottomans seized Serbia in 1458–1459, Bosnia in 1463–1464, and engaged in a war against Venice (1463–1479) (see below). Egypt was conquered in 1517.

cannons, which they helped improve; this said, the sultanate cannot be described, as does Hodgson (1975), as a mere “gunpowder empire”: it also relied upon a newly efficient administration, especially in the area of land tax collection. As for Europe, despite the armed confrontations accompanying the Ottomans’ rise to power, the Ottoman Empire was not merely a threat or an “obstacle” as it has too often been presented. It also stimulated growth in trade, greatly benefiting Flanders and Mediterranean cities such as Venice, Ragusa, and Marseille.⁶¹ Two axes of international trade coursed through the empire: one, east–west, ran toward the Mediterranean; the second ran north–south from Damascus and Bursa toward Moskovy and Poland. Italian and Flemish textiles found outlets in the Ottoman area, alongside Syrian and Egyptian products. Via caravans from Damascus, Bursa received Iranian silk and goods from India, and Genoese merchants traveled to Bursa in order to acquire them. In addition, an active maritime route linked Alexandria and Antalya, where spices as well as sugar and indigo arrived from the Indian Ocean. A slave trade still existed, from the Black Sea toward Egypt; this trade, however, was of limited size, and Egypt would attempt to compensate for this by stepping up its trade in African slaves. The Ottoman power fostered trade, which was not highly taxed, and allowed for a degree of interpenetration between the ruling elite and the merchants. The flow of products coming from the Ottoman Empire came with an exchange of knowledge, within a context of “cultural dialogue.” Far from remaining within a systematic relationship of opposition to Istanbul – Venice in fact signed a peace treaty with Mehmet II as early as 1454 – Italy sent artists to the Ottoman capital (Gentile Bellini for example), and humanists such as Francisco Berlinghieri and George of Trebizond dedicated some of their works to the Ottoman sultans (Brotton 2002: 51ff.). Mehmet also invited artisans as well as Christian and Jewish merchants to come to Byzantium. Relations would become conflictual, however, especially starting in 1463, when an alliance formed between Venice and the chief of the White Sheep Turkmen, Uzun Hasan, who at that time dominated Mesopotamia and Iran. This alliance, however, would lead only to the looting of Antalya and the ruin of Izmir on the Latin side in 1472. In 1473, Uzun Hasan was severely defeated in Anatolia. The Ottoman Empire and Venice finally concluded a new peace treaty in 1480.

The overall rise in trade created a new demand for precious metals. During the second half of the fifteenth century, silver mining began to soar in Europe; most of the silver extracted entered Egypt and western Asia via the Venetians, who traded not only with the Genoese, but also with the Mamluk state and the Ottoman Empire. The search for new sources of silver ore was a response to a shortage of this metal throughout Eurasia (especially between 1440 and 1460).⁶² At the end of the fifteenth

⁶¹ R. J. Barendse (2000: 189–190) aptly points out the link between the Ottoman rise to power and Europe’s economic growth.

⁶² Lieberman 2003: 140, 254. The fact that China stopped issuing paper money was one cause of this “silver famine.” As already noted, gold was also in great demand, and imports from West Africa were on the rise. On the lack of precious metals during the mid-fifteenth century, see von Glahn 1996: 83–99. R. Findlay and K. O’Rourke (2007: 116–117) feel that the drop in the relative price of silver in Europe following the Great Plague (along with an inflationary situation concerning prices of goods) led to reduced silver

century, exports in precious metals from Europe to the Orient amounted to over 10 tons of silver (Reid 1993a: 25). (Ashtor [1971] gives an amount of 13 to 16 tons per year during the fifteenth century, while the early sixteenth century saw a slowdown in European transfers of precious metals to the Levant [Subrahmanyam 1994b: 192]). These precious metals traveled still further, to India, whose trade balance with western Asia and Egypt was positive.

The Ottoman seizure of Constantinople in 1453 also triggered violent opposition to Islam in Christendom, a fact which sheds light on the Crusade-like aspect taken by the Portuguese expansion southward, supported by papal bulls issued in 1452, 1455, and 1456 (Hobson 2004: 136). In Spain, the Holy Inquisitional Tribunal was set up in 1478 at the Catholic Monarchs' request, and within a context of reconquering the Iberian peninsula from the Muslims. Moreover, north of the Black Sea, the Muscovite state of Ivan III (1462–1505) appeared symbolically as the ultimate heir of Byzantium, Ivan having married the niece of the last Byzantine emperor. Ivan extended his territory toward the Crimea region and the Caspian Sea, by taking advantage of the divisions between the various khānates arising from the disintegration of the Golden Horde khānate. Ivan's reign ended Tatar domination of Russia (and also the Novgorodian "Republic"). The granting of land in exchange for a supply of cavalry would foster the development of feudal structures, although in theory the beneficiary enjoyed only the usufruct of its "fief." A Russian Orthodox Church had formed by 1448, and during the sixteenth century, Moscow would style itself the "Third Rome" (Gonneau 2009).

The system grew more rapidly from 1470 onward, benefiting – albeit unevenly – its various competing cores and semi-peripheries. The late fifteenth century was a period of restructuring of trade networks in the western Indian Ocean; this started, in fact, between 1424 and 1433, with the disappearance of the *kārimī* and the relative withdrawal of traders along China's coasts. Egypt was feeling the effects of an economic and monetary crisis that was partially due to bad governance. By the late fifteenth century, land revenues were only a fifth of what they had been at the beginning of the fourteenth century. The country was affected by upheavals and famines. Internally weakened, Egypt was also threatened by the Ottomans, and was having difficulties with Yemen and Ethiopia. Ethiopia was expanding under King Zar'a Ya'eqob (1434–1468), who was anxious to control commercial exchanges from Zayla'.⁶³ Trade via the Red Sea

production; this, combined with a flow of this metal toward Egypt and India in order to pay for spices, may explain Europe's fifteenth-century silver famine, accompanied by a decline in commodity prices following the inflation of the late fourteenth century. Prices again rose, modestly, starting in 1460; this was due to two phenomena: the outflow of European silver toward the Orient and increased intra-European trade (Findlay and O'Rourke 2007: 118; Norel 2009b: 163–164).

⁶³ The Ethiopian state was already expanding during the early fifteenth century under Yeshaq I (1414–1429), who dispatched emissaries to King Alfonso V of Aragon (1427). Yeshaq destroyed the sultanate of Ifat and reached its port of Zaylā'. His successor, Zar'a Ya'eqob, sent delegates to Florence in 1439, where the Church held a Council. Ethiopia then controlled all the roads to Zaylā', via towns such as Gendebelo and Manadeley, whose locations are not precisely known (Hirsch and Fauvelle-Aymar 2004). During the 1430s, a broad coalition was formed in the Horn of Africa against Solomonic Ethiopia, led by the sultanate of Adal, successor to the sultanate of Ifat; this coalition included regions from Mogadishu in the south to Bait Mala in Eritrea, and would naturally look for support from Egypt. An increase in conflicts led to a growing slave trade via the ports of the Red Sea. The Nubian Christian kingdom of Alwa, in decline since the thirteenth century, disappeared at the turn of the fifteenth and sixteenth centuries.

continued to expand, however, and its control benefited the Egyptian state, though Yemen enjoyed a degree of revival under the Ṭāhirid dynasty. Overall, these developments in the Red Sea area fostered the rise of the Gujaratis, while the Cambay-Malacca axis grew to importance in the Indian Ocean. Alongside the luxury goods trade, a trade evolved in staple goods. Pearson (2003: 86) rightly points out the significance of the trade in rice, exported from India to the Persian Gulf, Sri Lanka, and insular Southeast Asia.

The late fifteenth century also saw an economic revival in Ming China, accompanied by growing markets and monetization based on an increasing use of silver. This development stimulated the importation of precious metals, especially from Japan, but also from Yunnan and Burma (which also exported to Bengal). In 1503, the Ming state would undertake limited new issues of bronze coins, with little success, because bad money was replacing good money. The use of silver tends to highlight the increasing involvement of the Ming in international trade at the end of the fifteenth century; the huge Chinese demand for silver would prove crucial during the sixteenth century, with regard to the deepening of globalization. An army reform was instituted, “military schools” were set up, and regiments were created, run by civil servants. The silk and cotton textile industries expanded; both of them benefited from an increase in areas under cultivation. Unlike the case in Europe at that time, merchants here were little involved in production. A modest development of wage labor marks this “capitalistic” surge in China; small-scale market production, however, remained preeminent and state-promoted: the government’s primary interests were in an agrarian policy helping ensure a fiscal foundation and social peace, as well as in the expansion of rural industries, to supplement income derived from agriculture (Wong 1997: 135). Greater freedom was granted to private trade, however, and a class of rich merchants emerged, especially from Huizhou; this class had partial links to the political elites. It is significant that a scholar-official named Qiu Jun, in 1487, presented a book to the emperor advocating a disengagement of the state from the economy and the liberalization of foreign trade. While Qiu Jun’s wishes were beyond consideration, Chinese foreign trade was indeed progressing at the beginning of the sixteenth century, with merchants from Fujian and Guangdong taking advantage of the officials’ corruption. Abundant discoveries of Chinese porcelain throughout the Indian Ocean are evidence for this half-clandestine, half-official trade. During the sixteenth century, the Ming state finally set up points of contact with the outside world: the port of Ningbo traded with Japan; Fuzhou was in connection with the Philippines; and Canton monopolized relations with Southeast Asia. Sizeable Chinese communities lived abroad, in particular in the Ryūkyū Islands, at Malacca, in Java, and in the Thai state of Ayuthiā. Toward Iran, trade continued along the Silk Roads, which remained active under the Timurids for most of the fifteenth century.

During the late fifteenth century, the entire world-system entered into a period of transformation. While France embarked on an unsuccessful intervention in northern Italy – at that time, no European state was able to take Venice – other innovative

strategies proved more efficient. There was progress in ship technology.⁶⁴ Caracks and later the caravels of the Spanish and Portuguese now used lateen sails or combined a lateen sail on the mizzen mast with square sails carried by central masts.⁶⁵ There were increases in both speed of transport and weights carried (during the fifteenth century, Genoa built caracks of 2,000 tons). From the fifteenth century onward, the Genoese capitalists, who had been expelled from the eastern Mediterranean by Venice and the Ottomans, financed the Iberian powers' enterprises, often with high interest rates hidden in "change"-related processes. The Genoese attempted to trade in the Canary Islands and to sail south along the western African coast.⁶⁶ The desire of the Genoese and the Iberians⁶⁷ to bypass Venice's grip on trade routes with Egypt and the Indian Ocean led at last to the discovery of the Americas by the Genoese Christopher Columbus in "1492"⁶⁸ for the benefit of the king of Spain. The same desire led to the irruption of the Portuguese fleet of Vasco da Gama into the Indian Ocean in 1498. Columbus was aware of the letter written by the astronomer Toscanelli, quoted above. In addition, Columbus traveled carrying the treatise *Imago Mundi* written by the theologian Pierre d'Ailly (1350–1420), who already supported the idea that India could be reached by sailing westward and who refused to envision the Indian Ocean as a closed sea. This Iberian expansion occurred within a climate of hatred and intolerance toward Islam and other religions. The fact that Granada was seized by the Catholic Kings precisely during the year in which America was discovered by a man who considered himself as invested with a holy mission is probably no coincidence, as P. Vilar has correctly noted (1974: 70).⁶⁹ In addition, on March 31, 1492, the Jews were

⁶⁴ Moreover, intensification of agriculture progressed, especially in Flanders and the Netherlands, with the development of agricultural techniques not using fallow land; this was the prelude to the European agricultural revolution of the sixteenth through eighteenth centuries (Mazoyer and Roudart 1998: 313ff.). Demographic pressure increased the demand for agricultural products, and led to a decrease in land available for animal pasture, and finally to changes in land use and cultivation techniques (Boserup 1998: 38–39). In England, as early as the late fifteenth century, "landlords began enclosing their rangeland, which until that time had been open to the herds of the neighborhood; this was done in order to keep this land for their exclusive use." The enclosure movement would accelerate during the eighteenth century (Mazoyer and Roudart 1998: 341–342).

⁶⁵ The use of a spritsail in Europe during the early fifteenth century has already been noted. Moreover, a lugsail probably influenced by the Chinese model appeared in the Mediterranean during the sixteenth century (Needham *et al.* 1971: 613). The ships Columbus sailed also carried compasses, quadrants, and sandglasses.

⁶⁶ On the part played by Genoa and Florence in the Portuguese and later Spanish expansion, see Braudel 1979, III: 116–117, 136ff. Florentines would be present in India "in the wake of the Portuguese enterprises" (see Bouchon 2004: 39).

⁶⁷ The marriage of Ferdinand of Aragon and Isabella of Castile in 1467 led to the creation of a powerful Spanish state. The areas of expansion of the Portuguese and the Spaniards were delimited by a Papal bull in 1493; and in 1494, under the treaty of Tordesillas, Spain and Portugal shared the newly discovered territories, with as dividing line a meridian located "370 leagues from the Cape Verde Islands to the west" (Carroué *et al.* 2008: 26).

⁶⁸ In 1492, however, Columbus discovered only one of the islands in the Bahamas. He reached Venezuela in 1498.

⁶⁹ As J. Baschet points out (2009: 583), "the voyage of Columbus was first of all an embassy to the Great Khan and other Asian rulers," to persuade them to convert to Christianity. Columbus's *Journal* reveals an obsession with gold, because the yellow metal had not only material, but also spiritual value. To find gold

expelled from the Iberian peninsula.⁷⁰ Moreover, the return of Vasco da Gama's fleet, in 1499 coincided with a burst of new hostilities between Turkey and Venice, which disrupted the spice trade. The Portuguese advance toward the western Indian Ocean had been prepared by expeditions seeking to discover a southern passage: one of these expeditions was led by Diogo Cão as far as the Congo⁷¹ and the Angolan coasts (1482–1486); more importantly, an expedition led by Bartolomeu Dias (1487–1488) sailed around the Cape of Good Hope. India, previously “at the border between real and unreal” (Amilhat-Szary 2004: 57), was now within reach of Portuguese vessels.

In 1498, Vasco da Gama sailed along the East African coast. At Malindi, he located a Gujarati pilot who agreed to guide this fleet to Calicut (Vasco da Gama may have seen a map in the possession of a Gujarati named Malemo Cana; see Hobson 2004: 143). During the ensuing twenty-five years, the king of Portugal sent no fewer than 247 ships toward the Indian Ocean. Between 1510 and 1515, showing a perfect understanding of the structure of the Indian Ocean trade, the Portuguese captured three key areas: Goa, Malacca, and Hormuz; but they failed to seize Aden. They then engaged in a triangular trade: the Indian cloth from Gujarat and the Coromandel coast allowed the Portuguese to acquire gold and ivory at Sofala, with which they purchased spices in India and Southeast Asia (gold and silver from America would come slightly later). The king of Portugal placed the pepper trade under state monopoly; the Casa da India, created as early as 1503, was in charge of purchasing, selling, and transporting pepper, spices, and other goods. In addition, the Portuguese practiced a form of large-scale piracy, forcing ships to acquire a pass or *cartaz* (from the Arabic *qirtas*, “paper”). Although the Portuguese attempt to control maritime routes and entrepôts⁷² upset the Indian Ocean trade for a while, its impact was ultimately limited,⁷³ and the Portuguese became largely integrated into the existing networks. However, their attempt did form part of an overall upsurge of the West, helped along by Ming China's (relative) withdrawal and Egypt's decline, which was accentuated by the Portuguese blockade during the sixteenth century. The spirit of conquest and innovation now appears to have been greater in Europe, although China, and the Ottoman,

was the sign of divine favor, and Columbus hoped that this metal would be spent for the reconquest of Jerusalem (Baschet 2009: 585).

⁷⁰ The kingdom of France expelled the Jews in 1394, and England had done so as early as 1290.

⁷¹ The Portuguese found a centralized state, the kingdom of Kongo, south of the river. The origin of this kingdom remains poorly dated (thirteenth century?). The king of Kongo was baptized in 1491; only the elite of the kingdom adopted Christianity, a foreign religion which reinforced its power (Maret 2005: 426–427). The alliance with the Portuguese led to a transformation of Congolese society during the sixteenth century, marked by a strengthening of hierarchies, decreased internal production, the development of slavery within the kingdom, and the rise of a slave trade along an axis running between Kongo and São Thomé (Ekholm 1972: 106–107; Lovejoy 2000: 38, 41–43). The direct relations established by European merchants with local chiefs would lead to the collapse of the Kongo kingdom, in which power relied upon control over exotic and local prestige goods (Ekholm 1972: 101–102).

⁷² The Dutch would later adopt a slightly different policy by controlling places of production and the supply of major trade goods such as Moluccan spices.

⁷³ See below. The arrival of the Europeans in the Indian Ocean, as A. Reid correctly notes (1993b: 9), was only one element in the ongoing changes in Asia.

Safavid, and Mughal empires were major Afro-Eurasian powers during the sixteenth century.⁷⁴ Unlike China, Europe's identity was increasingly built upon imperialism (Hobson 2004: 308), following a strategy in which the creation of monopolies was key to capitalism's success (this strategy was used by Venice and Genoa as early as the twelfth century).⁷⁵ The European states emerged as the great victors of an arms race which had started by 1500, with gun manufacturers present simultaneously in China, India, the Ottoman Empire, and western Europe. The Europeans' success in the Indian Ocean lay in their development of small cannons, which armed the Iberian galleons. As pointed out, beyond politico-economic designs, this expansion was also underpinned by ideology; under King Manuel I (1495–1521) of Portugal, expansion was clearly conducted within a “framework of messianic thinking”: the king believed that God had chosen him to lead Christianity's triumphal march and to crush Islam (Markovits and Subrahmanyam 2009: 612). The Portuguese chronicler Fernão Lopes (1378–1459) had already written: “A new world rises, and a new generation of men” (Bouchon 2004: 36).

Situated somewhere between archaism and modernity, the sixteenth century also paved the way for the European Scientific Revolution of the seventeenth century, within the context of the Reformation, which developed from 1521, and proved to be “a major step in the secularization of modern society” (McClellan and Dorn 1999: 208).⁷⁶ More importantly, after the discovery of the Americas, the Europeans expanded international trade to include the Atlantic area (African slaves were carried to Hispaniola as early as 1501),⁷⁷ before adding the Pacific Ocean to their trade routes during the second half of the sixteenth century. Between western Africa and America, they built up a new system of which they were the core, and utilized gold and silver from the New World to their advantage in order to enter Asian markets.⁷⁸ Everything was now in place for the “worldwide explosion of the Christian Far West” (Chaunu 1964: 57). This, however, did not yet signal the triumph of the West: until the beginning of the nineteenth century, Asian economies still largely dominated the economies of Europe (Pomeranz 2000).

⁷⁴ One cannot accept Gernet's idea (1999: 306) according to which “the rise of the West occurred at a time when the two great civilizations of Asia were threatened.” Various authors have argued that an Asian decline preceded the rise of Europe. M. Lombard (1980) has already been quoted. J. Abu-Lughod (1989: 361) also writes: “Of crucial importance is the fact that ‘the Fall of the East’ preceded ‘the Rise of the West’ [during the fifteenth century] and it was this devolution in the preexisting system that facilitated Europe's easy conquest [of the Indian Ocean].” A. G. Frank (1998) has repeated this statement for the eighteenth century. For a different picture, see K. Pomeranz 2000 and J. Goldstone 2008.

⁷⁵ The non-imperialistic policy of the Chinese contrasts with that of the Europeans. At the end of the fifteenth century, the king of England, Henry VII, advised the Venetian Giovanni Caboto to “discover, explore, conquer, occupy and take into possession all the lands he would find overseas” (Mielants 2007: 60). The fundamental aim of the Italian city-states was the pursuit of a “monopoly rent for their merchants” (Mielants 2007: 62).

⁷⁶ Shortly before he died, Copernicus (1473–1543) published a book describing a sun-centered universe.

⁷⁷ Cortes reached Tenochtitlan (Mexico) in 1521, and Pizarro vanquished the Inca Empire between 1531 and 1536. Another expansion, this one transcontinental, occurred during the sixteenth century, and was conducted by Russia, which took control of Siberia.

⁷⁸ Europe's demographic and economic recovery, however, “preceded the gold influx” (Vilar 1974: 83); the picture drawn by A. G. Frank (1998) underestimates the progress made by Europe.

Table III.1n.1 *Comparative chronologies (fifteenth and early sixteenth centuries): China; East and Southeast Asia; India*

China	East and Southeast Asia	India
1405–1433: Chinese fleets led by Zheng He are sent to the Indian Ocean.	1401: Malacca is founded. 1405: the Chinese intervene in Java and Sumatra.	<i>fifteenth century</i> : the kings of Orissa, the Bahmani sultanate, and Vijayanāgara fight among themselves.
1414: ambassadors of Malindi at Nanjing	1414: The Chinese intervene in Pasai.	1410: the Chinese intervene in Sri Lanka. 1411–1442: Ahmad Shāh, sultan of Gujarat
1433: the Ming officially abandon trade with the southern seas		1434–1467: Kapilendra Deva, Gajapati king of Orissa
1438–1449: Mongol attacks		
1441: Mamluk embassy		
1448–1449: rebellion of miners and peasants at the borders of Zhejiang and Fujian		1451–1526: the Lodi dynasty rules the Delhi sultanate.
<i>Late fifteenth century</i> : new economic growth in China		1458–1511: Maḥmūd I Bīgarhā Sultan of Gujarat
		1463–1482: Muḥammad Shāh III Bahmani Sultan
		1489–1492: the sultanates of Bījāpur Ahmadnāgar, Berar, and Bīdar are created.
1517: the Portuguese arrive at Canton.	1511: the Portuguese capture Malacca.	1510: the Portuguese capture Goa.
	1527: fall of Mojopahit, vanquished by the sultan of Demak	1512: the sultanate of Golconda is created.
		1526: Babur founds the Mughal Empire.

Table III.1n.2 *Comparative chronologies (fifteenth and early sixteenth centuries): Central Asia, western Asia, Persian Gulf; Egypt, Red Sea; East Africa, Madagascar; Europe*

Central Asia, western Asia, Persian Gulf	Egypt, Red Sea	East Africa, Madagascar	Europe
1405: death of Tamerlane	1403 and 1406: famines, plague epidemics, social unrest 1422–1438: Barsbāy's reign	<i>First half of fifteenth century</i> : revival of Kilwa Growth of Mogadishu and Malindi <i>Decline of Mahilaka</i> <i>The trading ports of Nosy Manja (Langany) and Kingany (northwest) are created.</i>	1394–1460: Henry the Navigator (Portugal) 1415: Portugal captures Ceuta (Morocco). Early Portuguese expeditions along the western African coasts

Continued

Table III.1n.2 *Continued*

Central Asia, western Asia, Persian Gulf	Egypt, Red Sea	East Africa, <i>Madagascar</i>	Europe
West: Kara Koyunlu Turkmen (1389–1467) and Ak Koyunlu Turkmen	1454: the Ṭāhirids replace the Rasūlid dynasty in Yemen.	<i>Importance of Vohemar, on the northeastern coast</i> <i>Imerina: appearance of fortified sites</i>	1453: The Ottoman Empire captures Constantinople.
East: Timurids	1468–1496: Qā'itbāy	Ascent of Mombasa and Pate, alongside Mogadishu Decline of gold exportation from both Zimbabwe and the city of Kilwa <i>Contacts are made between Imerina and southern Madagascar</i> <i>Development of secondary ports (Ambohabé . . .)</i> <i>Late fifteenth century: Anosy: appearance of fortified settlements during the Tranovato Phase, linked to the arrival of Zafiraminia.</i> 1505: capture of Kilwa and destruction of Mombasa by the Portuguese.	End of the Hundred Years' War between France and England. 1454: the Treaty of Lodi brings peace to the Italian states. 1475: the Ottoman Empire takes Caffa. 1487–88: Bartolomeu Dias rounds the Cape of Good Hope. 1492: discovery of America by Christopher Columbus The Catholic kings take Granada. Expulsion of the Jews from Spain 1498: Vasco da Gama enters the Indian Ocean.
1499: defeat of the Ak Koyunlu against the Safavids, who take Tabriz in 1501. The Safavid Ismā'il proclaimed shah. 1512–1520: Selim I's reign over the Ottoman Empire	1491: Peace signed with the Ottomans. 1491–1492, 1504–1506: social unrest and famines	1506: <i>contacts are made by Ruy Pereira with the east coast, and by Vasco Gomes de Abreu and/or Ruy Pereira at Saint Augustine. The Tristão da Cunha fleet explores northwestern Madagascar.</i>	1515: the Bourse is created at Antwerp. 1517: Hernando Cortes takes Mexico. 1533: Francisco Pizarro orders the execution of the Inca Atahualpa.
1514: Ottoman victory over the Safavids at Chaldiran 1515: the Portuguese seize Hormuz. 1516: the Ottomans take Syria. 1520–1566: Süleyman I reigns over the Ottoman Empire. 1534: Süleyman I takes Baghdad.	1517: conquest by the Ottomans		

14 Ming China: From Expansion to Withdrawal into Threatened Territory

I arranged [my notes] so as to make a book which I have entitled “The Overall Survey of the Ocean’s Shores.” It enables an interested reader in a brief glance to learn all the important facts about the various foreign countries. And in particular he will see how the civilizing influence of the Emperor has spread to an extent which could not be matched during former dynasties.¹

Undertaking the Great Maritime Expeditions

Following the consolidation of the empire under Hongwu at the end of the fourteenth century,² the reign of Emperor Yongle (1402–1424) was a period of prosperity for China. Agricultural progress allowed for demographic growth. In 1400, the country had 65 million inhabitants in 1400, out of a world population estimated at 350 to 375 million. Its capital, Nanjing, counted 500,000 inhabitants in 1400 CE (Morris 2013: 156). The production of iron increased, but – unlike during the period of the Northern Song – production occurred far from coal mines: this iron was probably “largely made with wood and charcoal fuel” (Pomeranz 2000: 63).³ Advances were also made in the textile sector and in porcelain manufacturing, which became a significant industry during the fifteenth century.

On the monetary level, Yongle’s reign was a period of inflation and increasing difficulties; under the Ming, however, the proportion of wealth spent on administration and defense was lower than it had been under the Song (Elvin 1973: 92). Paper money, reintroduced in 1375, was not convertible. It “depreciated in value as quickly as it had done under the Mongols” (Gernet 2002: 415). New bronze coins were issued between 1408 and 1433 owing to the discovery of copper mines; these coins appear to have been excluded from exports.⁴ Yongle reaffirmed the ban on the use of silver in transactions several times, a sign that the ban had been ineffective.⁵ He finally

¹ Preface by Ma Huan (interpreter with the fleet of Admiral Zheng He, during its fourth, sixth, and seventh expeditions) in his book *Yingya shenglan*, 1416 (Mills 1970: 70).

² China had 3,500 vessels, including 1,700 warships.

³ For energy capture, I. Morris gives an estimate of 29,000 kcal/cap/day in 1400 CE, and 30,000 in 1500: these figures are lower than those given for the Song period (2013: 111).

⁴ In fact, Chinese coins continued to arrive in Java during the fifteenth century, and until 1503 (van Aelst 1995: 383). The alloy used by the Ming was mainly brass, composed of copper and zinc.

⁵ The Chinese expansion into the northern Shan states, however, allowed the production of gold and silver to increase by the early fifteenth century (Reid 1993a: 13, after Deyell 1983).

authorized the reopening of the silver mines, and production of this metal increased significantly during the second decade of the fifteenth century (Brook 1998: 69). In 1425, rights to the sale of salt were granted to great merchants, who were paid in precious metals. In 1436, the government at last decided to levy taxes in silver – rather than in grain – in China’s eastern and southern regions, thus acknowledging the dominant place this metal had taken in the Chinese economy, not only as a means of storage value, but also as a means of exchange,⁶ a trend begun in the fourteenth century. Corvées were converted into payments in silver, and servicemen asked to be paid in this metal. In 1438, however, the court ordered the closure of the silver mines, which led to increased activity in illegal extraction (Brook 1998: 81).

By 1403, new work had begun on the Great Wall and on the Grand Canal, with the building of locks. The functioning of the Grand Canal required as many as 47,000 men, recruited via a system of corvée labor. The army provided barges for grain transport, and soldiers to maneuver the barges (Brook 1998: 48). This activity benefited the city of Suzhou, whose significance Hongwu had unsuccessfully attempted to diminish (Suzhou had opposed him when he came to power). In the wake of these efforts focusing on the Grand Canal, and perhaps thinking of bringing Mongolia into the empire, Yongle started major works at Beijing as early as 1406, with the building of the imperial city, on which 100,000 craftsmen may have worked. Yongle settled there officially in 1421; by that time, the capital counted 700,000 inhabitants (Morris gives an estimate of 678,000 inhabitants in 1500 CE). From the mid-fifteenth century onward, when grain was no longer being transported via maritime routes (Pomeranz 2009b: 123), the Grand Canal became increasingly vital for the supply of Beijing and its region.

On the governmental level, tendencies toward authoritarianism strengthened under Yongle, with an increasingly important private council which tended to bypass the branches of government. The emperor relied on a body of eunuchs, servants of the palace, who “supervised trade and foreign relations,” managed the imperial workshops, and more importantly “were able to gain control of the secret police” (Gernet 2002: 407).

In contrast to the second half of the fourteenth century, Yongle’s reign was a period of openness to the world. Foreigners lived in China and managed to occupy positions of leadership in the administration or the army. A translators’ college was created at Nanjing in 1407. The Chinese culture radiated throughout Asia, via the export of books and via Chinese migrants (Kerlouégan 2009b: 631–633).

China, however, wanted to maintain control over its contacts with the foreign world. While a sizeable trade was re-established with Japan, it was strictly regulated. From 1401 onward, the *bakufu* paid tribute in gold, swords, and sulphur to the Ming emperor; private trade was accepted only under conditions set by the Chinese, and was conducted by merchants appointed by the Ming government. After 1403, Japanese ships were required to have labels issued by the Ming power (Yamamura and Kamiki 1983:

⁶ In 1436, moreover, the ban on the use of bronze coins in foreign trade was lifted in Guangxi. Coins appear to have been a significant means of exchange in southern China, along the coastline (von Glahn 1996: 74–77). Silver dominance became even clearer from 1450 on.

340). Between 1401 and 1410, thirty-eight Japanese ships sailed to China each year.⁷ Chinese bronze coins were once again exported to Japan.⁸ Progress in Japanese agriculture provided the basis for craft and market development there. A bourgeoisie emerged, composed of producers and merchants, in particular in a fringe of port cities which would become “free cities” during the sixteenth century. With reference to this Ashikaga period, Braudel writes of “the coming into being of economic and social forces independent of the state”: “the seeds of capitalism had been sown” (2002, 11: 589) with the rise of long-distance trade, which ensured as much as 1,100 percent profit for those merchants involved in the Chinese trade.

Yongle dreamed of emulating Emperor Kublai. Ming policy alternated between diplomatic relations with and military raids on the various Mongol groups. Chinese armies, benefiting from the growing use of firearms, intervened against the Mongols in 1410. At the same time, frontier markets were opened, where tea and silk were exchanged for horses,⁹ and the main Mongol confederations paid tribute throughout the fifteenth century (Kerlouégan 2009a: 194). The Chinese entered Manchuria, and ensured their suzerainty on the oases of Central Asia. “The biggest steppe invasion in 1414 [involved] about half a million men” (Morris 2013: 207). “Tea-horse markets” were instituted in Gansu in Qinghai (Palat 2015: 77). Campaigns were also launched to the south, in northern Vietnam, which was occupied from 1407 to 1427.¹⁰ The Chinese used firearms during this invasion. More importantly, China’s place in maritime trade now reached its zenith. As early as 1402 and 1403, Chinese ships were sailing to the Coromandel coast, and “ambassadors” (merchants, in fact) from Calicut and the Chola country were arriving in China. Between 1405 and 1431, seven sea expeditions involving dozens of very large junks – “treasure ships” transporting more than 20,000 men – were sent to the Indian Ocean;¹¹ these expeditions were led by the eunuch Zheng He who was a Muslim from Yunnan, like many palace eunuchs from this region. Zheng He had five fortresses built, at Malacca, Aceh, Chittagong, Calicut, and Hormuz. They became logistic centers for the Chinese fleets (Meicun and Ran 2014). These expeditions had been preceded by intense “diplomatic” activity at the

⁷ Visits became less frequent after 1410 (1433, 1435, 1453, 1468), and the number of ships was limited (5, 6, 9, and 3, respectively). Yamamura and Kamiki 1983: 340.

⁸ According to some authors, the hemorrhage of copper and exportation of precious metals may have influenced the Ming’s decision to withdraw partially from world trade after 1433.

⁹ Ming China also encouraged horse breeding, by establishing “contracts with private stockbreeders who were required to deliver quotas of horses in exchange for tax exemptions” (Kerlouégan 2009a: 208).

¹⁰ While coveted resources (horses and precious stones) may explain the Ming’s interest in Central Asia, it is more difficult to discern their economic motives for invading Annam, except for control of its ports.

¹¹ The credibility of the sizes given for the ships of this fleet has sometimes been questioned: the largest was supposedly 140 meters long – Christopher Columbus’s *Santa Maria* measured only 30 meters – while the others apparently averaged 100 meters in length (see Deng 1997: 53). For Kerlouégan (2009a: 624), the ships may have measured at least 60 meters. New technical progress appears to have been made under the Ming, especially in sail technology: the Ming vessels had fewer sails than ships of previous periods, but a greater sail area (Deng 1997: 52). The “treasure ships” had as many as nine masts. The Ming military fleet possessed over 1,000 great warships. Conti (2004: 114) mentions Chinese merchant junks, “vessels of about 2,000 tons, each with five sails and masts,” and hulls formed of three layers of planks and built with watertight compartments. A Venetian ship weighing 720 tons was the largest European ship mentioned for this period.

time of Emperor Hongwu: embassies from Japan, Korea, Vietnam, and Champa arrived at Nanjing as early as 1369, followed by missions from Cambodia and Thailand in 1371, and from the Thai–Malay peninsula and the Coromandel coast in 1370 and 1390.

While one purpose of the expeditions led by Zheng He was to bring back rare and precious merchandise to enhance the emperor's prestige, these were primarily political and military operations.¹² They reflect a contrast, however, between Chinese policy – which aimed, not at conquest or direct economic control, but at the inclusion of other powers within a tributary system – and the Westerners' imperialist practices, as initiated by Venice and Genoa in the twelfth century (Mielants 2007: 60). Ma Huan writes: "When the heavenly writing came, chieftains and heads of the barbarous tribes all vied to give it greeting. Tribute of southern gold, rare gems from distant parts appear" (Mills 1970: 73). The representatives of "sixty-seven overseas states, including seven kings" went to China "bearing tribute to render homage to the emperor" (Mills 1970: 2). Most of these so-called ambassadors were probably merchants. In 1411, the sultan of Malacca arrived in person, heading a delegation of 500 (Kerlouégan 2009b: 621). In 1415, ambassadors from Malindi presented a giraffe.¹³ The offering of such a strange animal, from a distant country, had the value of a blessing for the emperor (Helms 1988): in fact, the rulers' botanical and zoological gardens, which already existed in ancient Mesopotamia and Egypt, should be viewed as accumulations of sacred power. Chinese embassies were sent to Java, Sumatra, Malacca, and Cochin, on the Malabar coast. A Chinese emissary, Chen Cheng, traveled several times to Transoxiana. It was within the framework of this tributary system, then at its peak, that Zheng He's soldiers sometimes intervened militarily, for example in Sumatra and Sri Lanka (Wade 2005). The interventions were also diplomatic: a Chinese ambassador, Hou Xian, went to the king of Jaunpur, in 1420, asking him to put a stop to its aggressive policy against Bengal (Pelliot 1933: 316). The Chinese attributed titles and statutory symbols – such as silver seals, hats, robes, and belts – to the most important rulers (from Calicut, Aden, Samudra, Malacca); these grants also shed light on the politico-religious context of the expeditions.¹⁴ China was working to ensure a world order where its emperor stood at the zenith. The idea of a Chinese civilizing mission is also clearly set out in the foreword written by the interpreter Ma Huan to his *Yingyai Shenglan* (Mills 1970: 72).

These Ming expeditions may have "led to [some] disruption of regular trade, attested by numerous prohibitions against foreign trading, and an enlargement of the proportion of trade conducted under the guise of 'tributary missions'" (Digby

¹² Tracing Yongle's nephew – whom Yongle had removed from power – has sometimes been given as another aim for these expeditions. This objective played only a minor role.

¹³ Slightly later, in 1419, Aden also sent a giraffe as tribute. Others would come from Mecca in 1433, and from Bengal in 1438 (Mills 1970: 155 n. 11).

¹⁴ There are many examples of this Chinese "suzerainty." In 1412, an emissary from Bengal arrived in China to announce the sultan's death; Yongle then sent an ambassador to Bengal to confer the investiture on his son (Pelliot 1933: 317).

1982b: 138).¹⁵ Note that the first expedition was launched in 1405, one year after Tamerlane's abortive attack against China, at a time when trade along the Silk Roads was disrupted.¹⁶ Calicut was the final destination for this first expedition (1405–1407), which went through Champa (Vijaya [Qui Nhon]), Java (Surabaya), Sumatra, Malacca, and Sri Lanka. Zheng He intervened in Java in a struggle for succession to the throne of Mojopahit, and in Palembang against Chinese “pirates” who owned seventeen large ships.¹⁷ Beyond Southeast Asia, the second expedition (1407–1409)¹⁸ sailed to Cochin and Calicut. The third (1409–1411) visited Thailand, Java, Malacca, Samudra, the Malabar coast, and Sri Lanka. In Sri Lanka, Zheng He defeated the king's army and captured the king, who was replaced by a prince suitable for China. Zheng He left a trilingual inscription at Galle: in Chinese, Tamil, and Persian, a fact highlighting the cosmopolitanism of Sri Lanka and of the Indian Ocean networks in general; it also showcased the openness of the Chinese. The Chinese inscription honored Buddha and Sinhalese Buddhism; the Tamil version celebrated an incarnation of Vishnu; and the Persian text glorified Allah and the saints of Islam. This tolerance stands in sharp contrast to the behavior of the Portuguese during the ensuing century. When Zheng He returned to China, the king of Sri Lanka and the other prisoners were presented at the court. “Fear grew in the other kingdoms, and a growing number of envoys arrived [bringing tribute]” (*Mingshi*, Pelliot 1933: 280). The fourth expedition (1414–1415) stopped in Champa, at Kelantan, Pahang, in Java, at Palembang, and then Malacca, Aru, Samudra, and Lambri before sailing to Sri Lanka, Kayal (on the Coromandel coast), the Maldives, Cochin, Calicut, and further to Hormuz and two poorly identified countries, “Bila and Sunla”;¹⁹ part of the fleet visited Bengal. During this expedition, the Chinese troops interfered in the local affairs of the sultanate of Samudra-Pasai (northern Sumatra) by helping a king regain his throne which had been “usurped” by a rival.²⁰ The fifth expedition (1417–1419) followed the same route as far as Hormuz, and part of the fleet also sailed to Lasa (on the South Arabian coast), Aden, Mogadishu, Barawa, and Malindi; on its way home, the fleet escorted ambassadors from nineteen kingdoms who were coming to present tributes to the Chinese court in 1416,²¹ During the sixth expedition (1421–1422), which carried home the

¹⁵ Referring to the elimination of “pirates,” Zheng He writes of a “purification of the routes” achieved by the Chinese intervention (Ray 1987: 70). Along the Chinese coasts, officials were in fact involved in the flourishing smuggling trade (Pearson 1991: 104).

¹⁶ These routes became active once again under Tamerlane's successor, Shāh Rukh.

¹⁷ Two groups of traders appear to have operated out of Sumatra (Deng 1997: 75, 89–90). Zheng He's first expedition consisted of 317 ships, 62 of them very large vessels (“treasure ships”), and carried a total of 27,800 men. The fleet returned with ambassadors from various countries.

¹⁸ The dates given by Pelliot (1933), who relies here on the *Mingshi*, are different for this expedition and the following one, but they are probably erroneous (cf. Mills 1970: 8).

¹⁹ Bila and Sunla may refer to islands in the Maldives or in the Laccadive Islands. The sailing time from Poulo Weh to Beruwala (Sri Lanka) amounted to thirteen days.

²⁰ The “usurper” was captured, sent to China and executed (Mills 1970: 13).

²¹ While Chinese sources describe houses with four or five stories at Kilwa (Devisse 1985: 717), the Chinese do not appear to have visited Kilwa themselves. Gernet leaves the question open for ships of the seventh expedition (1999: 348). As Allibert notes (2011a: 9),

ambassadors from Hormuz and other countries, the fleet was divided into two units in Sumatra: one sailed to India and further to Aden, Mogadishu, and Barawa.²²

Note that the expeditions “ignored” Japan and Korea. Sizeable trade occurred with Korea, however, where the Yi (Choson) dynasty founded in 1392 had rebuilt a strong power, with Seoul as its capital. Confucianism replaced Buddhism as the main ethical code and the basis for the administrative system. King Sejong’s reign (1418–1450) favored an intellectual blossoming; this was marked by the development of an Academy; the creation of a Korean alphabet; the drawing up of geographic maps; the compilation of books dealing with pharmacopoeia; and developments in mathematics, music, and artillery (Kim 2009).

In 1424, Yongle’s successor, Hongxi, ordered a stop to the expeditions, while at the same time reducing taxes levied on farmers: Confucian scholars reassumed full responsibility for their country’s affairs.²³ Xuande (1425–1435), nonetheless, launched a new expedition, the seventh (1431–1433) and last one: in 1434, the Chinese sent ambassadors only to Sumatra (Pelliot 1933: 239). Xuande’s expedition counted over 100 large vessels; it visited Champa, Java, Palembang, Malacca, the Malabar coast, and Hormuz. “Some of the ships sailed from Calicut to Jeddah, and rejoined the main body of the fleet via Aden and the south coast of Arabia” (Gernet 2002: 401–402).²⁴ The *Mingshi* also contains notes concerning Mogadishu and Barawa; these towns may have been visited by emissaries sent by Zheng He.²⁵ According to the Chinese researcher Zheng Yijun, Zheng He died in Calicut in 1433 during the fleet’s return. Chinese ships may have sailed even further, as far as Australia (Mills 1970: 21–22).

The economic interest of Zheng He’s ventures has been debated.²⁶ It is a fact, however, that huge quantities of pepper – whose importation was a royal monopoly – were carried back. Following these expeditions, trade through tribute was set up with

“some authors such as Dolors Folch (2008: 212) even doubt that the Chinese fleet ever went to [Malindi], given the vagueness of the account; they believe that the visit was made by a Chinese delegation led by Hong Bao aboard an Arab ship during the last voyage dated to between 1431 and 1433.”

²² Seven envoys of Zheng He (including Ma Huan), who left with ships from Calicut, also visited Mecca, which was controlled by Egypt at that time. Recall that Zheng He and Ma Huan were Muslims (Mills 1970: 177–178).

²³ Throughout Chinese history, we observe this antagonism between the supporters of a strong, interventionist power, in both the political and economic fields, and a current (often marked by Confucianism) advocating the state’s relative disengagement from the economy. Remember the “Discourses on salt and iron” at the time of Han Emperor Wudi, whose expansionist policy was accompanied by high taxation; at that time, the Confucians were opposed to this policy (Bang 2009: 105).

²⁴ This fleet, in which Ma Huan was present, also sailed to Bengal before going to Calicut. The above summary on Zheng He’s expeditions, however, is essentially taken from Mills (1970: 10ff.), with whom Gernet sometimes disagrees, due to discrepancies among the data used. Gernet thus indicates a first visit of Chinese ships on the East African coast during the fourth expedition, by a section of the fleet that left Sumatra to sail directly to the African coast.

²⁵ The fleet was usually divided into several squadrons. The atlas by Mao Kun (presented at the court in 1628) indicates that “it took 150 watches to travel from Male to Mogadishu”; this suggests that the voyage was sometimes made by way of the Maldives Islands (1970: 21 n. 6).

²⁶ For some historians, however, the merchandise brought back consisted not only of luxury products of secondary importance, but also of goods essential for China: “copper ores, sulphur, timber, horses, and spices, not to mention gold, silver, and rice ... The advantages of the trade were chiefly on the side of the Ming court” (Filesi 1972: 33).

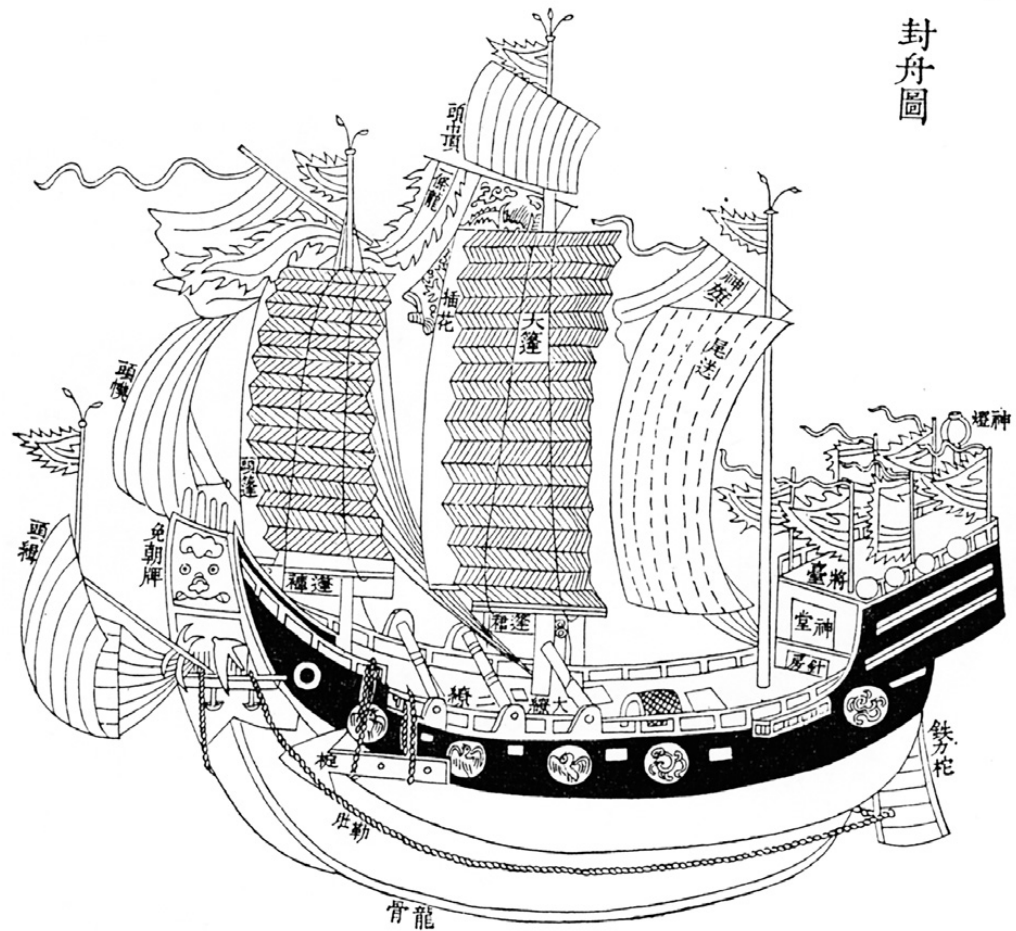


Figure 14.1 Drawing of a junk, from a book published in 1757. J. Needham *et al.* 1971, fig. 939, p. 405. By permission of Cambridge University Press

some of the states that had been visited. Mamluk Egypt sent two delegations to Nanjing, one during the first quarter of the fifteenth century, and the other in 1441. Many embassies came from the states of Southeast Asia. The construction of a transfer station at Malacca, stocked with Chinese goods, fostered a private Chinese trade.²⁷

The search for scientific knowledge has also been mentioned with regard to these expeditions. In 1403, an official Chinese encyclopedia comprised 937 volumes; this vast amount of work shows a will to accumulate – and appropriate – knowledge. Zheng He had nautical charts at his disposal; they resulted from a collective elaboration which may have relied in part on Indian and Arab charts, at least initially. Zheng He's expeditions certainly made it possible to improve these charts. The "Mao Kun map," which provides cartographic data linked to Zheng He, depicts the Indian Ocean as far

²⁷ Deng 1997: 86. S. A. M. Adshead's idea (1995: 199) according to which the primary aim of Zheng He's enterprises was to reduce the private Chinese presence in the southern seas should be qualified, although, in 1410, the imperial court did seek the help of a Javanese tributary mission to bring home Chinese emigrants (Mielants 2007: 65). It is true, however, that the Ming did not revert to the Song policy, which had been favorable to merchants.

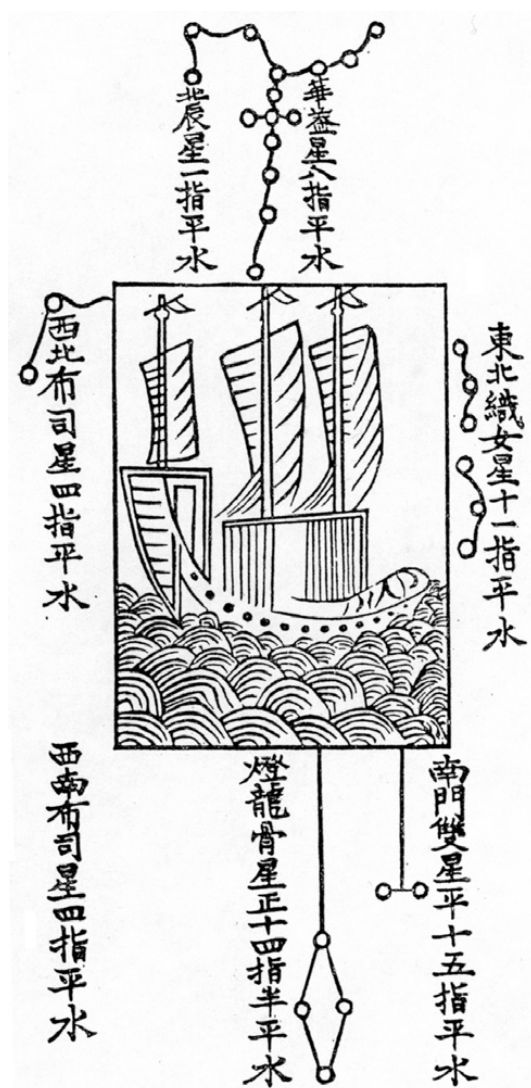


Figure 14.3 Stellar diagram, from the *Wubei zhi* written by Mao Yuanyi, published in 1621. J. Needham *et al.*, 1971, fig. 994, p. 566. By permission of Cambridge University Press

This diagram is one of the four stellar diagrams in the book; they probably date from the time of Zheng He's expeditions.

"Map of the guiding stars when crossing the ocean on the return from Ceylon to Sumatra.

[On the north] [upper part], the Hua kai stars [50 of Cassiopeia?] are 8 fingers [high, above the level of the water]. The Pei ch'en star [Polaris] is 1 finger [high].

In the north-east, the Chih nü stars [Lyra] are 11 fingers above the level of the water

[On the south], the two stars of the Nan men [Centaurus] are level and are 15 fingers above the level of the water. The Teng lung ku stars [Crux] are exactly $14\frac{1}{2}$ fingers above the level of the water.

[On the west], in the south-west, the Pu ssu stars [Fomalhaut ?] are 4 fingers above the level of the water. In the north-west, the Bosu stars [Beta of Pegasus ?] are 4 fingers above the level of the water." (Mills 1970: 339)

as East Africa.²⁸ A Korean map dated to 1402, drawn up by Yi Hoe and Kwon Kun, is known through a copy dated to c. 1500. It shows the contour lines of Arabia and Africa, and mentions the Chi-shan Islands off the Spanish coast (most likely the Azores).²⁹ The *Xingcha shenglan* written by Fei Xin describes various regions along the East African coast: Bulawa (Barawa); Zhubu (Giumbo); and Mugudushu (Mogadishu). Fei Xin indicates that Barawa could be reached in twenty-one days, from Sri Lanka, and Mogadishu in twenty days, from Kulam.³⁰

Shipbuilding was a significant industry from 1403 to 1419, with a very large shipyard set up at Nanjing. In 1420, the Ming navy had vessels. In addition, its mass production of cannons, guns, mortars, and rockets³¹ made China the foremost military power in the world during the fifteenth century. Zheng He's expeditions could have been the prelude – as were the ensuing Portuguese invasions – to control over the trade networks of the Indian Ocean, but this did not happen. As M. N. Pearson correctly notes, “[Zheng He's expeditions] have to be seen as totally different in character [from the Portuguese expeditions of the fifteenth and sixteenth centuries]; intricately bound up with the tribute system” set up by the Chinese government, they had nothing to do with a capitalistic expansion supported by the state (1991: 105). Moreover, the religious proselytism of the Portuguese was totally alien to Chinese ideas. The Chinese could well have “discovered” Portugal; they did not do so for ideological reasons, and because “there was no treasure to retrieve in the West”: wealth was in Asia, not in Europe (Arrighi 1994: 35).

The 1433 Withdrawal: External Threats and Internal Difficulties

In 1419, the Ming state decided to cut back its shipbuilding program.³² After the disappearance of Yongle in 1424, in the north of the empire, the line of defense against the nomads of the steppes “was placed further south, probably for financial reasons,” a situation which in fact weakened the Chinese positions (Kerlouégan 2009a: 195). The

²⁸ Pearson 2003: 73–74. Mao Kun lived between c. 1511 and 1601. The map takes up forty pages in the *Wubei zhi* by Mao Yuanyi, presented at the court in 1628. Folios 19v–20 show India, Sri Lanka, the Maldives, and East Africa (Mills 1970: 238ff.). The map includes sailing directions, as well as altitude measurements for certain stars in thirty-four different places (Mills 1970: 250). Kilwa is not listed among the fifteen names mentioned on the map for East Africa (Mills 1970: 301–302). The *Wubei zhi* also gives (folios 22v–24) several stellar diagrams meant to help seamen navigate from one point to another, by indicating “the altitudes of certain stars in at least four different directions” (Mills 1970: 335). Used since the Song period at least, a kind of Jacob's staff allowed mariners to measure the height of stars: that of the Polar star, in particular, made it possible to assess the latitude of one's point of observation.

²⁹ This map uses Chinese data: in particular, it makes use of the oldest maps drawn by Li Zemin and Qingjun (see above) (Needham and Wang Ling 1959).

³⁰ Filesi 1972: 37–39. Fei Xin accompanied the third, fifth, and seventh expeditions of Zheng He as a soldier. He mentions the stone houses of Mogadishu, four or five stories high. “The native products are frankincense, gold coins, leopards, and ambergris. The goods used in trading [by the Chinese] are gold, silver, coloured satins, sandal-wood, rice, china-ware, and colored taffetas.” “The rich people turn to seafaring and trading with distant places.” Fei Xin, however, did not himself travel to Mogadishu and Barawa (Mills 1970: 59ff.).

³¹ During the fifteenth century, China manufactured cannons, some of large size, but movable. Since the fourteenth century, the Chinese armies had also used batteries of flamethrowers or mobile rocket launchers.

³² Even after 1433, however, “the superiority of the Chinese navy continued” (Hobson 2004: 145).

empire clearly went through a phase of decline at this time. The Chinese were expelled from Vietnam in 1427 by a popular uprising. In 1433, facing new Mongol threats, due to climatic changes and to the restrictions placed upon long-distance trade by the Ming state, China grew more inward-looking.³³ As early as 1421 (although the transfer only became effective in 1450), the center of power of the Ming emperors shifted from the south to the north, at Beijing; at the same time, the authorities initiated some resettlement of northern China from the south. Elvin (1973: 100), however, notes a global decline in military colonies during the fifteenth century due to diminishing contributions from the state and a tendency of officers to transform these colonies into private estates, using soldiers as a labor force: thus abused, the soldiers deserted. During the same period, Mongol attacks intensified between 1438 and 1449,³⁴ leading the Ming to build new walls, particularly following the tragedy of 1449, when the Mongol chief Esen took the Ming emperor prisoner during the battle of the Tumu fortress, while the emperor was visiting the northwestern territories. The Mongols were not attempting to control the Chinese territory; they were reacting against deteriorating trade conditions: Esen explained his raids by invoking the exaggeratedly low prices he had obtained for his horses (Kerlouégan 2009a: 208). A growing number of soldiers abandoned the tasks of transportation to which they had been assigned; this led to a decrease in the amount of grain transported to Beijing: it fell from 6.2 million *picul* in 1432 to 3.4 million in 1464 (Elvin 1973: 105).

There were probably other reasons for the Ming retreat from international trade, such as the economic and ecological costs (deforestation)³⁵ of the naval expeditions and of maintaining the fleets. These aspects shed some light on the empire's financial difficulties;³⁶ there may also have been the fear of the consequences of a commercial expansion that was difficult to control and likely to undermine the state authority: in 1436, the authorities forbade private shipbuilding for transoceanic trade and sometimes ordered the destruction of private ships (Mielants 2007: 66). Another factor may have been the destruction by fire of the first and newly built forbidden city, a bad omen (Levathes 1994: 158). Trade restrictions with Inner Asia were also aimed at stopping the export of firearms (Elvin 1973: 91). Strong political opposition developed with regard to overseas enterprises, set against a Confucian religious background: in the end, contact with the external world was seen as morally and politically dangerous (Wong 1997: 149). Participants in the Zheng He expeditions were forbidden from speaking of their travels. The accounts and charts from these expeditions disappeared from the imperial archives. Feelings of hostility prevailed toward both foreign minorities and contacts

³³ The emperor, however, launched an expedition to Sumatra in 1434, led by chief eunuch Wang Ching-hung, who had been the companion of Zheng He. Chinese emissaries also traveled to Japan in 1433. The restrictions placed on foreign trade did not prevent a free market from flowering within China (Warburton 2003: 47); neither did they prevent merchant relations from continuing with the southern seas (see Hobson 2004: 61ff., who argues that Chinese isolationism from 1433 onward is, above all, a western myth).

³⁴ Trouble also flared at the border between Yunnan and Burma. The Chinese led four costly – and at times disastrous – campaigns against the Thai state of Luchuan between 1436 and 1449.

³⁵ Confucian doctrine teaches that mankind and nature must exist in a harmonious relationship.

³⁶ The cost of building the “Great Wall” must have been huge; it surely limited investments by the Ming state in other fields.

with overseas people.³⁷ “The later ‘tribute missions’ which reached China were not the result of imperial encouragement and pressure, but rather due to the initiative and organization of foreign rulers [notably from Bengal] and merchants anxious to maintain a profitable exchange” (Digby 1982b: 138).³⁸ According to the *Shihlu*, an Arab embassy sojourned in China between 1433 and 1436. An Egyptian embassy was received in 1441. Although Persian merchants still traveled to Canton, the only port open to foreign trade, Hormuz would no longer send missions after 1436 (Ptak and Kauz 2001: 53; Salmon 2004: 54). Foreign merchants were denied access to Chinese ports and the authorities tried to prevent Chinese ships from sailing to the southern seas. A relative downfall ensued for China’s merchant communities; it was marked by a process of sinicization and a decline of Islam. “Enrichment of merchants was viewed as having been achieved at the expense of peasant welfare and government revenue” (Deng 1999: 96; Mielants 2007: 77); the concentration of wealth and the search for it were both seen as threats against which the country needed to defend itself: generally speaking, the Chinese state “supported commercial exchange without promoting concentrations of merchant wealth” (Wong 1997: 137, 146; Mielants 2007: 76). Yet after 1433, paradoxically, Ming hostility against private Chinese trade favored the rise of Chinese communities abroad, thus at Malacca, Banten, Brunei, in the Sulu archipelago, and in the Ryūkyū Islands (Wang Gungwu 1990: 406, 408).

It is certainly significant that the merchants in Europe exerted a growing influence on emerging nation-states, while at the same time the Ming state was blocking private long-distance trade (Mielants 2007: 69). But the restrictions imposed by the Chinese state were undermined by the development of a more or less clandestine trade that often benefited from various types of complicity.³⁹ Thus, “in spite of the suspensions decreed by the Ming, there were seventeen Japanese embassies in the years following 1432 and the volume of official trade seems to have been fairly considerable” (Gernet 2002: 421). In fact, 50 percent of the so-called “Japanese pirates” mentioned in the written sources were Chinese.⁴⁰ Commerce developed with the Ryūkyū Islands, and also along land routes leading to the Gulf of Thailand or to Yunnan and Burma. This commerce made it possible to circumvent the Ming regulation. In 1443 and 1453 “the Chinese court wrote explicitly to require the Javanese king to send tribute less often. Siam and Malacca, however, were more persistent in continuing with tribute missions during the second half of the century, despite mounting Chinese apathy or irritation,

³⁷ The withdrawal did not result simply from a reaction against the eunuchs’ power, as has often been written. In fact, eunuchs still dominated the political scene from 1436 to 1449. As early as 1426, a minister had exhorted the emperor to abandon expeditions abroad. The vice-president of the war ministry, Liu Tashia, took it upon himself to burn the reports from Zheng He’s expeditions (Fleisi 1972: 68). A seventeenth-century compilation entitled *Li-tai T’ung-chien chi-lan* emphasizes that Zheng He’s expeditions “yielded no profit in return”; they were costly, and many of the expeditions’ soldiers perished in shipwrecks or were cast away on distant shores.”

³⁸ The last Sinhalese delegation arrived in China in 1459.

³⁹ Under Ming Emperor Xianzong (1464–1487) especially, associations between officials and private merchants have been described for shipbuilding and for illegal ventures, as well as the cooperation of Ming officials with foreign traders (Deng 1997: 90, 93).

⁴⁰ As early as 1430, Chinese emissaries traveled to Japan to protest against the exactions of Japanese pirates (Mills 1970: 3).

and this helped them to replace Java as the primary entrepôts for Southeast Asian trade with China.” Due to weaker controls between 1457 and 1520, “shipping across the China Sea continued to grow: ... merchant junks sailed annually from South Fujian to the Nanyang (the southern seas)” (Reid 1993a: 15–16).

Trade with Japan was limited, however. In 1453, Japan sent nine ships to Ningbo: they sailed back to Japan carrying the equivalent of 90 tons of copper. This alarmed the Chinese government, which accepted only minimal trade: from 1465, the Japanese were authorized to send a maximum of only three ships per decade.⁴¹ During this period, Japan experienced tumultuous times. The Ashikaga shogunate collapsed during the Onin war (1467–1477), which erupted over the succession of the *shogun* Yoshimasa; rural revolts broke out – in which peasants and low-caste samurai were allies – and Japan was plunged into a state of near-constant warfare among regional military powers during a period marked by the emergence of new feudal lords called *daimyo*.⁴² Several great families competed with one another for political power and control over trade with China, notably the Hosokawa and Ochi families, the first based at Kyoto, and the second centered on Yamaguchi. Japan’s situation of deflation during the late fifteenth century incited the population to produce counterfeit Chinese coins.

The Ming retreat offered the role of intermediary to traders in the Ryūkyū Islands, for trade with Southeast Asia. “They have three or four junks,” writes Pires, “which are continuously buying in China ... in the port of Foqem [Fukien: Fuzhou or Amoy]” (Pires, ed. Cortesão 1944, 1: 129). From these islands, ships carried Chinese bronze coins, gold, and silver from Japan, “weapons of all kinds,” silk, porcelain ware, and paper to Malacca and Thailand. The kingdom of the Ryūkyū Islands thus became “a crucial hinge in the networks of Southeast Asia.” Between 1430 and 1442, it sent “17 missions to Ayutthya, 8 to Palembang, and 6 to Java” (Reid 1993a: 16). Its diplomacy was still quite active from 1463 to 1481. The king of the Ryūkyū Islands “encouraged traders from Fujian to settle near its capital and conduct their trade under his protection.”⁴³ These islands were home to a sizeable Chinese community (3,000 households) during the second half of the fifteenth century. Chinese were also present in Japan, Thailand, Java (Banten ...), Malacca, and Manila. Chinese merchants sometimes acted as intermediaries, transshipping Japanese iron to South Asia, or sending spices, *sappan* wood, and sandalwood to Korea and Japan (Deng 1997: 150, 151). Chinese who had settled in Southeast Asia joined embassies sent to China, often as interpreters (Kerlouégan 2009b: 630).

Portuguese texts bear out the notion that China, at the beginning of the sixteenth century in any case, was not as closed as some authors have argued. Pires notes that by 1515, tributary embassies “from the king of Java, the king of Siam, the king of Pase, the

⁴¹ However, R. Palat reports the export of 67,000 swords to China in 1483 (2015: 111).

⁴² In this “Warring States Era,” the *daimyo* “consolidated proprietary domains ... They accepted village self-government” – but the villages had to meet tax demands – and issued legal codes (Lieberman 2009: 412–413).

⁴³ According to P. Calanca (2010), the settlement of Chinese abroad had the agreement of the Ming government, “in order to contribute to the success of the tributary missions,” but this point remains debatable. As early as Hongwu’s reign, in any case, privileged relations were established between China and the Ryūkyū, and a triangular merchant network (China–Ryūkyū–Malacca) was clearly in place under Emperor Yongle (Calanca 2010).

king of Malacca” go to China every five or ten years, bringing “the best there is in [their] countries of what [they] know they like there ... No Chinese may set out in the direction of Siam, Java, Malacca, Pase and beyond, without permission of the governors of Canton, and they charge so much for signing the license to go and come back that they cannot afford it and do not go.”⁴⁴ Chinese junks – not always owned by Chinese – continued to sail as far as Malacca, but not much further. A merchant called Chulata (or Fulata) thus used to sail to Malacca with his ships (his voyages are mentioned in 1509, 1511, 1513, and 1527). He took on the task of establishing the first contacts between the Portuguese and the Chinese authorities. One of his junks joined the fleet of Fernão Peres de Andrade in 1517. Lin Xiyuan (c. 1480–1560), an official from Fujian, “reached in 1530 the position of chief judge in the capital Nanjing, [and] openly supported maritime trade: his family owned a large commercial seagoing fleet with a business network spreading to Southeast Asia” (Deng 1997: 88). In 1516, Barbosa points out that “the inhabitants [of China] are great merchants,” despite the Confucian philosophy advocated by the state; Chinese and Muslim traders dominated trade in the southern China Sea (Barbosa 1967, 11: 215). At Quanzhou, especially, maritime activities were led by descendants of Muslims (Salmon 2004: 51). The presence of Chinese porcelain dating from this period in India, western Asia, and East Africa demonstrates that a significant trade was maintained, both “clandestine” and official, via the “gateways” instituted by the state. During the sixteenth century, the port of Ningbo accommodated trade with Japan. Trade with the Philippines was conducted via Fuzhou (a similar role had been assigned to Quanzhou between 1368 and 1374, and after 1403). Canton, “where the whole kingdom of China unloads all its merchandise,”⁴⁵ monopolized relations with Southeast Asia.⁴⁶ Toward Iran, trade was maintained via the Silk Roads, still active under the Timurids, who sent various embassies to Beijing.⁴⁷

While it is true that for part of the fifteenth century, Ming policy had the effect of inhibiting the Smithian dynamic which had taken hold under the Song (Norel 2009b), the decline in Chinese foreign trade after 1433 should be put into perspective (Hobson 2004). Within China, some productive sectors did experience slowdowns.⁴⁸ Steel

⁴⁴ Pires, ed. Cortesão 1944, 1: 118–119. “If any stranger is in the land of China,” adds Pires, “he may not leave without a license from the king, and for this license, if he is rich, he is reduced to nothing ... If any junk or ship passes beyond the bounds allotted to it for anchorage, its goods are confiscated by the king; and the people are put to death for it ... [There are] ports allotted to each nation [outside Canton]. [Chinese] merchants come to value the merchandise and to take their dues. Then they bring them the merchandise [given in exchange] ... They say that the Chinese made this law about not being able to go to Canton for fear of the Javanese and the Malays” (1944, 1: 119, 121–122). The taxes were 20 percent on pepper, 50 percent on brazilwood, and 10 percent on other merchandise. For pepper, the demand is so high that “the Chinese will buy ten junk-loads a year if as many go there [enter their ports].” Pires also notes “[imports of] infinite quantities of the black wood that grows in Singapore” (1944, : 123).

⁴⁵ Pires, ed. Cortesão 1944, 1: 120–121. Pires signals the export of porcelains, silk, and cotton fabrics from Nanjing, a city of “great merchants.” Cotton cultivation developed in China from the thirteenth century onward. Items such as copper vessels, iron kettles, and saltpeter were also exported.

⁴⁶ Gernet 1999: 367. While the restrictions imposed by the Ming barely slowed down activity in the private sector, they did disrupt technical progress (Deng 1997: 58).

⁴⁷ Embassies also came from towns in Central Asia such as Hami and Turfan.

⁴⁸ This slowdown, however, is only relative. J. M. Hobson (2004: 184) thus points out that during the late fifteenth century, China probably produced more books than all other countries put together. It is true

production was only half of what it had been under the Song. Chinese society no longer showed its ancient capacity for innovation (Mokyr 1990: 238). During most of the Ming period (1368–1644), “the autocratic tendencies of the political authority were hardly favorable to rapid development in the Chinese world” (Gernet 2002: 348). China, however, maintained a sizeable silk production, which remained competitive internationally thanks to its low price (Lopez 1975: 108; Mielants 2007: 82 n. 83). “Women’s work in textile craft was officially encouraged and supplemented agricultural income, apparently an ongoing issue for the authorities [Wong 1997: 138]” (Norel 2009b). Men also worked in the textile industry. China tried to increase cotton production, during the fourteenth and fifteenth centuries, by cultivating new land, but this could not continue due to the scarcity of land not only available, but also suitable for cultivation.⁴⁹ Households specialized in production for the market, abandoning the production of subsistence crops, a change which caused concern to the Ming and Qing officials (Bray 1999: 177, 201). In fact, farmers also abandoned agriculture because great landowners had appropriated their land. The government’s fear was both moral and economic; smaller grain harvests meant risking famine and social disorder. The state thus tried to slow down the growing division of labor, which favored the lower Yangtze as a manufacturing center, at the expense of northern China (Bray 1999: 183).

The difficult situation in the Chinese countryside engendered riots around the middle of the fifteenth century. Dispossessed of their land by rich landowners, peasants became serfs, farmers, or wanderers. This multiplication of the number of “lumpen people” led to the clandestine exploitation of mines (repressed by the power in place); more smuggling and piracy (also true for the Japanese); and upheavals. A great revolt of miners and farmers erupted in 1448–1449 at the borders of Zhejiang and Fujian, pitting great landowners against exploited serfs and farmers (in fact, the distinction between the latter two categories is hard to establish) (Elvin 1973: 238; Brook 1998: 84–85). By 1450, the Ming state acknowledged farmers’ rights on land it did not exploit (Pomeranz 2000: 71; Norel 2005). Following revolts by minorities, “aboriginal areas” were placed under the direct control of the central administration (Kerlouégan 2009a: 199). Riots occurred in the Middle Yangtze valley between 1465 and 1476. These upheavals were also linked to a period of climate cooling affecting the entire Northern Hemisphere by the mid-fifteenth century and leading to decreased rainfall in China.⁵⁰ This climatic deterioration engendered famines in 1448, in the

that China experienced a recovery at the end of the fifteenth century, marked by new advances, for example in rice cultivation (see below).

⁴⁹ Elvin 1973: 212–215; Norel 2009b. Norel notes that work organization in cotton cloth manufacturing remained linked to petty commodity production by farmers. This resulted in relative technological stagnation in China, in contrast to the progress seen in Europe during the eighteenth century.

⁵⁰ One notes lower temperatures and increased aridification in continental and northern China during the 1450s especially (An and Thompson 1998: 20, 28). W. S. Atwell (2002) observes a demographic and economic slowdown by the mid-fifteenth century in China. An overall decrease in temperature was seen in the Northern Hemisphere around 1460 (see above). An increase in temperature occurred by the late fifteenth century. As in 1400, S. Giralt *et al.* (2004) note increased rainfall at Lake Issyk Kul around 1500, along with increased solar activity.

1450s and the 1460s.⁵¹ In addition, epidemics spread throughout various regions in 1455.

Land registers were not regularly updated. Therefore “the amount [of taxes] paid in the 1390s remained the basis for all subsequent transactions ... By the second quarter of the fifteenth century, the Ming already had lost much of its ability to collect revenues” (Lieberman 2009: 613–614).⁵² It was also felt that “low taxes were indispensable to agrarian prosperity” (Lieberman 2009: 615). Taxes on trade were also relatively low. While tax yields remained low, military expenses rose. The financial problems of the Ming state partially explain the 1433 withdrawal, but Elvin (1973: 92) sees a link between the isolationist policy pursued and the non-convertibility of paper money; the latter, however, goes back to the fourteenth century. The devaluation of paper money during the first half of the fifteenth century led to more frequent use of silver in transactions. This silver came from Japan, and also from Burma and Vietnam. The state abandoned its issuance of paper money in 1435 (Zurndorfer 1999: 402). As Gernet points out, the failure of paper money “reveals a fundamental contradiction ... between a state economy and a commercial activity which it could not control and which overflowed it everywhere” (2002: 415).⁵³ The collapse of the monetary system was also linked to rising military expenses for defending the borders; it was thus necessary to resort to silver for transactions, but the government issued no coins. The result was a “silver famine” affecting not only China, but also Japan, Vietnam, and parts of insular Southeast Asia during the mid-fifteenth century, limiting economic growth (Lieberman 2003: 140).⁵⁴ “Private coins” appeared in increasing amounts during the second half of the fifteenth century: these were used in the internal Chinese market (including for payment of commercial taxes) and exported to Japan and Southeast Asia.

Economic Prosperity and Market Advances (Late Fifteenth Century)

The authoritarianism of the Ming political regime, which Gernet has pointed out, is valid mainly for the period of Hongwu and Yongle rule. In fact, various institutions limited the system’s rigidity. Thus, a body of censors “was responsible for controlling the actions of public servants”; it even had “the duty of admonishing the emperor” (Kerlouégan 2009a: 206). “Any official can submit proposals to the emperor,” and

⁵¹ Gernet 1999: 361, 362. See above. Gernet points out that, due to taxes and burdens, small landowners became “wanderers.” Revolts of miners broke out once again in 1458 and 1476. Lower temperatures in China were accompanied by increased aridification in the northwest; see Zhang *et al.* 2007.

⁵² V. Lieberman notes that, historically, low taxation in China went hand in hand with stagnation in the number of officials: “18,000 listed posts in the Tang, 20,000 in the Song, and 20,000 in the Qing” (2009: 606). The number of administrative units also remained the same. This does not, however, reflect a process of devolution: “internal reorganization enhanced efficiency,” the number of locally employed “subbureaucrats” increased, and the state, generally speaking, benefited from the support of the elites (2009: 607–609).

⁵³ “The promissory note with a nominal value in 1375 of one thousand copper coins or one *liang* of silver was worth three to four times less a few years later, and a thousand times less than a *liang* of silver in 1445” (Gernet 2002: 415).

⁵⁴ This “silver famine” in fact affected all of Eurasia.

local powers enjoyed some degree of autonomy (Kerlouégan 2009a: 206). This mode of governance gave the empire a genuine capacity for adaptation. In this way, the decline of the military colonies was balanced by the setting up of regiments led by civil officials, whose soldiers were better paid. “Military schools” were instituted, based on the principles of the civil schools. The state encouraged the organization of local militias, a system that was later sanctioned by the government in 1494 (Kerlouégan 2009a: 207).

The state accepted the development of a monetary economy relying upon silver, and – within certain limits – that of private trade. During the late fifteenth century China enjoyed new economic prosperity, along with the formation of an incipient system of markets. During the late fifteenth and the sixteenth centuries, regions often became specialized in certain types of production: “Henan and Shandong produced cotton; Zhejiang and Fujian supplied silk; Fujian specialized in sugar, [and so on]” (Lieberman 2009: 559). This burst of capitalistic practices, however, was under less state control than it had been during the Song period. Zhang Tao, a magistrate and chronicler from Sheh county (whence many Huizhou merchants originated), regretted the expansion of trade during this period, which, he felt, dissociated man from agriculture, and engendered competition, inequality, and social disorder (Brook 1998: 88). The replacement of corvées by payments in silver, a practice which grew from 1490 onward, went along with developing wage labor. State production of silver, however, remained limited to 2 or 3 tons per year, which led to the importation of Japanese silver. The Ming state would resume limited issues of coins in 1503, with little success: bad money was driving out good money. During the sixteenth century, in connection with new growth in manufacturing activity, the huge Chinese demand for silver would play a crucial role in the deepening of globalization (Flynn and Giraldez 2008). At the end of the fifteenth century, silver was more expensive in China than it was in India, Iran, and Europe: the respective silver:gold ratios were 1:6 in China, 1:8 in India, 1:10 in Iran, and 1:11 or 1:12 in Europe (von Glahn 1996: 214; Pomeranz 2000: 190). The great merchants contributed to the economic upswing by financing the building of bridges and schools (von Glahn 1996: 93). Social transformations led to growing mobility for the population, reflected in an (apparent) demographic decline in the censuses (which list more men than women, due to the fact that not all women were taken into account in these censuses). A sign of the times, in 1487, Qiu Jun (1420–1495), a member of the Hanlin Academy,⁵⁵ presented a book (*Daxue yanyi bu*) which had the approval of the emperor. In this book, Qiu Jun argued that the state should not intervene in markets (not even in the grain market), except during periods of crisis. For Qiu Jun, it was difficult to imagine a state-controlled market which could generate profit and avert corruption. The state, he felt, should not become involved in crafts, or enforce a monopoly on salt. On the other hand, Qiu Jun accepted a monopoly on the tea trade with the Mongols: this trade made it possible to obtain horses, under a system that had been in place since Hongwu (and even earlier, during the Tang dynasty, which had instituted a

⁵⁵ This Academy, founded during the Tang period, produced literary works, gathered archives, and did secretarial work for the court.

monopoly on tea in 793). Qiu Jun pointed out the generally positive role played by merchants in the economy and attacked restrictions on maritime trade, which he said the state should foster.⁵⁶ In a statement that is far from the Confucian principles prevailing during the period of Hongwu, Qiu Jun praised the market's efficiency in redistributing products as well as its achievement in adjusting supply and demand (Brook 1998: 102). While Qiu Jun's advice was only very partially followed, the government allowed Huizhou traders to take control of salt production; in exchange, these merchants – who had formed something resembling guilds – transported grain to the north for the armies. Licenses for this were paid in silver, and with this silver the state bought grain on the market. A monetization of the markets thus clearly occurred at this time (Brook 1998: 108; Wong 1999: 217). Moreover, cotton production and the textile industry generally speaking (using hemp, silk, and cotton) progressed, with an increasing division of labor, for example between spinners and weavers; workshops employing hired labor developed, especially in the cities (Elvin 1973: 277; Brook 1998: 108, 116). There was little technological progress, however, in the textile sector, due to an abundant labor force and the small size of most workshops. Unlike what was occurring in Europe, merchants were scarcely involved in production processes (Elvin 1973: 282ff.). In general, however, this period saw the enrichment of great merchants, particularly traders from Huizhou, who dominated the salt market and also pawnbroking activities. These merchants attempted to develop links with state officials by participating in cultural circles and by financing various institutions. Their situation, however, remained vulnerable. At the beginning of the sixteenth century, it was increasingly wealth that determined status. Moreover, the dissemination of knowledge was fostered by the growing production of paper. Publishing houses developed, allowing the number of books, now less expensive, to increase. Although foreign trade was not liberalized according to Qiu Jun's recommendations, it did expand steadily – especially between China and Southeast Asia – with the merchants from Fujian taking advantage of the officials' corruption. Porcelain of the blue-and-white type was produced especially for the Muslim world, with inscriptions in Persian or Arabic. From the sixteenth century on, China's trade balance appears to have been positive with all regions of the world (Frank and Gills 2000: 8).

One sees that the “decline” of the empire was only relative ; significant transformations were taking place by the late fifteenth century in China, with “the appearance of a lavish lifestyle, the increasing prosperity of merchants and the development of an urban economy” (Kerlouégan 2009a: 209). Unlike the picture often presented, and although Yongle's reign indeed appears to have been an “anomaly” in the Ming era, China was never really closed to the world, in hostile reaction to anything foreign. “Movements of men, merchandise, and ideas never ceased” (Kerlouégan 2009b: 630), although the 1433 withdrawal did limit commercial and cultural exchanges with the outside world. Throughout the fifteenth century, China

⁵⁶ The attitude of the Ming state toward domestic trade varied throughout the fifteenth century. In 1423, a tax was introduced on retail trade (this tax was removed in 1528). At times, certain achievements (such as road construction) accelerated trade growth (Brook 1998: 111).

remained “a multiconfessional land, ... permeable to foreign influences” (Kerlouégan 2009b: 632). “Despite the lack of official support,” one sees “a continuous development of Chinese communities abroad” (Kerlouégan 2009b: 634). The Chinese decision in 1433 to step back from international trade, however, was crucial for the ensuing centuries. It left a void which would benefit the Europeans; first, however, Indian merchants – Gujaratis, Tamils, and Bengalis – would take better advantage of the new situation, in the Indian Ocean and in Southeast Asia.

India: The Flowering of the Sultanates and the Expansion of Vijayanāgara

My Lord is a Baniya. He conducts His commerce righteously. Without scales and balances, He weighs the entire universe.¹

A king should improve the harbors of his country and so encourage its commerce that horses, elephants, precious gems, sandalwood, pearls and other articles are freely imported . . . He should arrange that foreign sailors who land in his country after storms or diseases, are well looked after. Make the merchants of distant foreign countries who import elephants and good horses attach to yourself by providing them . . . daily audience, presents, and allowing decent profits. Then the articles will never go to your enemies.²

During the fourteenth century, the primarily agrarian Delhi sultanate disintegrated, giving rise to regional states. These states were characterized by diversified economic activity, significant agricultural and craft production, and – for those bordered by seas – an opening onto long-distance maritime trade (Gaborieau 1995a: 454). The sultanates of Gujarat and Bengal are the best examples of these sea-oriented states which were centers for both production and banking. India developed significant textile production, exported mostly from Gujarat, Bengal, and the Coromandel coast. These exports stimulated cotton and indigo cultivation, as well as production in other sectors and trade among the various regions of the subcontinent. The emergence of regional sultanates led to a dual movement, with, on the one hand, cultural models inherited from the Delhi sultanate (such as the influence of the Persian culture; the adoption of Urdu as its *lingua franca*; and the significance of the Chishtiya brotherhood – introduced in Rajasthan as early as the twelfth century) and, on the other, a diversification of local Islamic cultures (Gaborieau 1995a).³ This period saw Islam move forward in the great sultanates (Gujarat, Bengal, and Deccan), in city-states such as Calicut, which flowered in the interstices between kingdoms, and in exchange networks. Islam was

¹ *Kabir Granthāvali*, c. 1500, quoted by Habib 1990: 379. Kabir was a low-caste weaver, as well as an ascetic, philosopher, and poet (see below).

² Krishnadeva Raya (1509–1529), king of Vijayanāgara, quoted by Stein 1982: 117 and Ramaswamy 1985: 75.

³ In addition, a new religious movement was created in Punjab at the end of the fifteenth century, called Sikhism. It opposed the caste system and attempted to overcome the conflict between Hinduism and Islam. Its founder, Nanak (1469–1539), had been influenced by some Sufi currents. The Indian poet Kabir (1440–1518) also attempted a synthesis between Sufism and Hinduism. Texts from his teaching have been included in the holy book of Sikhs, the *Adi Granth*, as well as in writings by the Sufi Cheikh Farid.

pluralistic; it showed a strong Iranian influence in Gujarat, in Deccan, and even in Bengal, whereas the western Indian coast (especially Kerala) and the Coromandel coast developed relations with the Red Sea and the Hadramawt (Subrahmanyam and Markovits 2009). Two other major Indian states were Hindu: the kingdom of Vijayanāgara, which occupied the southern peninsula, and that of Orissa, ruled by the Gajapati Sūryavamsha dynasty from 1435 onward. In contrast, the area in northern India between Bengal and Gujarat underwent some political fragmentation. We thus observe once again a “polycentric political structure [prevailing in previous times], but the situation was not a mere reversion to pre-Delhi sultanate status quo ante” (Lieberman 2009: 728).⁴ While the disintegration of the Delhi sultanate gave rise to a new flowering of local cultures (Lieberman 2009: 724–727),⁵ Indian states were now more integrated, politically and commercially. Despite the intensity of the military conflicts between states that marked the fifteenth century, the overall period was an era of growth for India, with progress in statebuilding, urbanization, monetization, and trade.⁶ The needs of competing states and “new military technologies stimulated processes leading to increased monetization and commercialization” (Palat 2015: 115).

The Sultanate of Gujarat

Governor Zafar Khān Muzaffar asserted the independence of Gujarat in 1391. His grandson, Ahmed Shāh, who ruled the sultanate from 1411 to 1442, placed his capital at Ahmedabad, and encouraged the rise of Cambay as a major port and hub for international trade.⁷ Gujarat’s prosperity remained intact under Ahmed Shāh’s successors, especially under the long reign of Maḥmūd Bigarhā (1458–1511), and despite wars waged against neighboring states. The Gujaratis forged strong relationships with the Arabic world and Southeast Asia, as well as with East Africa, where the Portuguese would encounter Gujarati vessels in the ports of Malindi and Mombasa. Commercial and political links were also established with Turkey. Maḥmūd Bigarhā tried to resist the Portuguese intrusion, but after a naval defeat in 1509 and the settlement of the Portuguese at Goa in 1510, he chose to sign a peace treaty with them. The largest ships found by the Portuguese during the early sixteenth century in the western Indian Ocean were from Gujarat.⁸ Moreover, it appears that “written charts comparable to the

⁴ “Indian political development was oscillatory and discontinuous,” due to factors that were cultural, geographical, and historical, with Inner Asian invasions playing a crucial role (Lieberman 2009: 760–761).

⁵ “Sufi literati wrote in vernacular languages . . . Some Lodi rulers expanded the use of Hindi alongside Persian for administration . . . In Bengal and Deccan also, Muslim courts used local vernaculars in addition to Persian” (Lieberman 2009: 726–727). Literature was also written in local languages. Moreover, rulers “granted non-Muslims parts of authority” and at times “patronized local cults” (Lieberman 2009: 673).

⁶ Relying on Southeast Asia, V. Liebermann has aptly demonstrated that these processes are intimately linked to one another. “By eroding the self-sufficiency of local actors, commercial integration enhanced each capital’s coordinating appeal”: the development of markets went along with growing centralization (2009: 36).

⁷ At the same time, his reign shows a marked hostility to Hinduism: “in 1414, an officer of Sultan Ahmad Shah I received the order to destroy all idolatrous temples throughout Gujarat” (Wink 2004: 160).

⁸ Pearson 2003: 68–69. A ship belonging to the sultan, which was seized at Hormuz in 1510, “could run to as much as 800 tons and carry 1,000 men . . . The average Gujarati trading vessel would have been somewhere around 300–600 tons” (Manguin 2012: 605). Gujarati ships showed a unique technique, with rabbetted

Portuguese portolans” were in use at this time, in Gujarat and elsewhere in the Indian Ocean.⁹ In this ocean, merchants exported various textiles – produced *en masse* by a cheap labor force¹⁰ – in villages and centers such as Ahmedabad, Surat, Pattan, Baroda, and Broach. Heading family firms or enterprises founded on partnerships, the great merchant bankers dominated the system, advancing material and money to artisans and petty traders. Gujarat also exported glass and stone beads. According to Insoll (2003: 151), the presence in the district of Ratanpor of the Sidi, a population of African origin, may be linked to the trade for beads. The Sidi ensured the protection of a shrine built on top of a hill where carnelian was exploited (Khalidi 1988; Basu 1993; Kenoyer and Bhan 2004). On the East African coast, such exports allowed Gujarat to capture most of Zimbabwe’s gold supply.¹¹ Tomé Pires states that, while Gujarat welcomed many foreigners (such as Rumes,¹² Arabs, and Abyssinians), “all the trade in Cambay is in the hands of the heathen . . . called banians,”¹³ a term referring to both Hindus and Jains. Pires said of the non-Muslims: “There is no doubt that these people have the cream of the trade” (Pearson 1976: 26). For G. Bouchon, in fact, “the organization of trade was based on the association of Muslim sea merchants and Hindu bankers (Vantias and Jains).”¹⁴ The Hindu merchants were involved primarily in trade with the interior, but they were also sea merchants, and could be found in large numbers at Thatta, Goa, Calicut, Cannanore, Cochin, Hormuz, Aden, and Malacca. At Surat, the greatest merchant of the early sixteenth century was the Brahman Malik Gopi, owner of thirty ships. Credited by Pires as “richer than all the men of the Orient,” Malik Gopi was involved in the politics of the sultanate (Subrahmanyam 1995: 765). The Muslim population consisted of various groups: Sunnis, and Ismailis, divided

planks sewn together (Manguin 2012: 606). Unfortunately, we have few representations of ships for the fourteenth and fifteenth centuries. J. Deloche (1996: 208–209) signals depictions of *dbangis*, boats from the coasts of Sind and Kutch, on memorial stones in the Goa Museum (see pl. va,c). A relief from Arumda (Gujarat) bears the figure of a three-masted ship that somewhat resembles a *kotiya* ship from the coasts of Kathiawar and Kutch (but we know nothing about its rigging system) (pl. viiia). A stone in the Bhuj Museum depicts a ship with a square stern (perhaps a Chinese influence), similar to a *baghalab* boat. In Tamil Nadu, a relief from Tirukkurunkudi shows a ship with sewn planks, whose form recalls that of the *sakouna* of the Red Sea (pl. 1xa,b). The Portuguese chronicler Gaspar Correia observed two types of ships, one with sewn planks, the other with nailed planks. The use of nails, also mentioned along the Malabar coast, could well result from Southeast Asian and Chinese influences (Manguin 1985a: 10–11).

⁹ Ray 2002b: 85. According to Niccolò dei Conti (2004: 114), “most of the time, the Indians navigate with the stars of the other pole . . . They do not use the compass and determine the positions [latitude] by measuring the altitude of stars.”

¹⁰ After the fourteenth century, India would be less reliant on slavery, partly due to the “availability of cheaper free labor” in different crafts (Habib 1982b: 92).

¹¹ On the importance of Gujarati cloth on the East African coast, see Machado 2011.

¹² As G. Casale (2007) points out, the term “Rume,” in Portuguese texts, is ambiguous: it may refer to people belonging to the Ottoman Empire, whether Muslim or not (such as Greeks, Armenians); it may also refer to Mediterraneans, generally speaking. Rumes are mentioned in the early sixteenth century on the western coast of India, in Bengal and Burma.

¹³ Pires, ed. Cortesão, 1944, 1: 35, 39, 41. “Those of our people who want to be clerks and factors ought to go there [to Cambay] and learn, because the business of trade is a science in itself” (1: 42). Pires points out the importance of the Jains.

¹⁴ Bouchon 2004: 17. The Banjara caravan traders were Hindus or Muslims (Habib 1990: 377). Cooperation was the rule among traders adhering to different religions, since “the brokers of the Muslim merchants were Hindus” (Habib 1990: 397).

between Bohras and Khojas . . . In addition to people from the Persian Gulf, there were Hadramis, the Sayyid, and merchants from the Red Sea. The Zoroastrian Parsis formed another merchant community (Subrahmanyam 1995).

Pires gives us a good description of Cambay's central position in oceanic trade networks:

Cambay stretches out two arms; with her right arm she reaches out towards Aden, and with the other towards Malacca, as the most important places to sail to . . . The Gujaratis have factors everywhere, on the west coast of India, in Bengal, Pegu, Siam, Pedir, Pase, Kedah . . . Gujarat ships come to these kingdoms every year, one ship straight to each place . . . The Cambay merchants make Malacca their chief trading center. There used to be a thousand Gujarat merchants in Malacca, besides four or five thousand Gujarat seamen who came and went [between Malacca and Cambay]. Malacca cannot live without Cambay nor Cambay without Malacca . . . If Cambay were cut off from trading with Malacca, it could not live, for it would have no outlet for its merchandise . . . [:] silks and all the different kinds of cotton material,¹⁵ indigo, lac, a great deal of good opium [and the merchandise of Aden and Hormuz]. The merchants of Cairo bring the merchandise which comes from Italy and Greece and Damascus to Aden, such as colored woolen cloth, gold, silver, quicksilver, vermilion, copper, rosewater, camlet, glassbeads, weapons . . . Those from Mecca bring a great quantity of opium, rosewater, and much liquid storax. Those from Aden bring to Gujarat a great quantity of opium, raisins, quantities of gold and silver, and horses, . . . madder, indigo, . . . and other dyes which are of value in Cambay. (Pires, ed. Cortesão, 1944, 1: 43, 45, 11: 269)

Largely controlled by merchants from western Asia, Diu was also an important port, enjoying some autonomy (Pearson 1991: 72).¹⁶ The governor, Malik Ayāz, “a manumitted slave,” was a Muslim from Jilān, in Iran. He was himself a great merchant and the owner of ships (Pearson 1991: 72).

Gujarat also facilitated exchanges within the country by encouraging the building of “wayside inns” (*sarai*), created by donations or by private institutions. The sultanate imported precious metals, which allowed it to issue coins (Pearson 1976: 22).

In 1451, succeeding the Sayyid dynasty, a member of the Lodi Afghan clan reunified northern India and set up an efficient administration in the central region of the Delhi kingdom. The Lodi Empire, however, underwent relative demonetization, whose scale remains debated (did it affect only the state or the society as a whole?).¹⁷ In any case, coins were issued by the sultans. Whereas the first Lodi relied upon various Afghan clans, Sikandar Lodi (1489–1517) had a special regard for men from Arabia and Persia, and for Indian Muslims (Wink 2004: 137).

¹⁵ Duarte Barbosa mentions “cotton muslins, and other white and coarse cloths of the same, of which many ships take cargoes to Arabia, Persya, India, Malaca Çamatra, Melynde, Magadoxo and Mombaça; also other colored cloths of diverse kinds, [and] silk muslins” (1989, 1: 154). Used in the textile industry, indigo was also exported; the culture of indigo expanded at the end of the fifteenth century in Gujarat and along the Coromandel coast (Barendse 2000).

¹⁶ See the testimony of Ludovico di Varthema, in the early sixteenth century, quoted by Subrahmanyam (1995: 765).

¹⁷ Subrahmanyam 1994a: 18. J.-F. Richard (1994) and I. Habib (1994) here express opposing views. Habib notes that taxes were levied in kind, reflecting a general shortage of silver. For Barendse (2000), the Lodi state did not have the means to set up a significant administration, whence the absence of regular taxation.

The Bahmani Sultanate

Further south, the Bahmani sultanate was also an agrarian state open to the outside especially through the ports of Chaul, Dabhol, and Goa, which was the venue – disputed by Vijayanāgara – for a large horse market.¹⁸ The nobility was made up of two opposing groups: on the one hand, Muslim Indians Dakhnī (meaning “from Deccan,” although they could hail from the Delhi region and be of Afghan origin), who were mainly Sunni, and on the other, foreigners Pardeshī, or Āfāqī, who were often Iranians and Shiites (note that Subrahmanyam [1996b] qualifies the oppositions between these groups). The Sunni Habshī, of African origin, played an eminent political role, leaning toward the Dakhnī in internal power struggles.¹⁹ The Kazarunī merchants, from the region west of Shiraz, ensured links between Deccan and the Persian Gulf.²⁰ Iran also produced soldiers, administrators, craftsmen, and scholars. The army of the heavily militarized Bahmani sultanate included men from Khorasan; from the “land of Jagatai” (Central Asia); Arabs; and Turkomans (Alam and Subrahmanyam 2007: 86). This army is reported to have made use of mining, at the siege of Belgaum in 1472, for example, where it also used mortars (Palat 2015: 83).²¹ The Bahmanids maintained a special relationship with the Sufi order of the Ni’matullāhī which formed in southern Iran and counted many followers in Shiraz.²² The Bahmani court used the Persian and Dakani languages. A Perso-Islamic culture showing a mixture of Arabic, Persian, and Turkish elements “informed Sultanate language, literature, administration, etiquette, dress, music, art, architecture and cuisine” (Lieberman 2009: 672). Pires estimates the number of Iranian migrants in the Deccan region at 10,000 or 12,000 during the early sixteenth century. These Iranians exemplify the link between trade and politics (Subrahmanyam 1996b). They took an increasingly important share in the kingdom’s affairs during the fifteenth

¹⁸ The Russian Afanasy Nikitin left Hormuz in 1469 with horses, bound for Chaul (via a port on the Makran coast and Cambay).

¹⁹ At the time of Maḥmūd Gāwān, the Habshī obtained the directorship of two of the four Bahmani provinces. A Habshī was the instigator of the conspiracy which led to the execution of Maḥmūd Gāwān. While the sultan Maḥmūd Shāh (1482–1518) took power with the help of a Turkish faction, he appointed a Habshī as *diwān* in charge of finances. Pires signals that one of the four governors of the kingdom was an “Abyssinian slave of the king,” Milic Dastar [Malik Dastur], who “lives in Gulbarga, where he has a garrison” (1944: 51). A. Wink writes: “It has been suggested that most of the Habshis of the Deccan and Gujarat came from the arid region of present-day Tanzania” (2004: 147), but there is no clear evidence for this.

²⁰ Traders of other origins were also active. The great merchant Khalaf Hasan Basrī, who was given the title *malik al-tujjār* (“chief of the merchants”) by Sultan Aḥmad Shāh Bahmanī, originated in Bassorah. This merchant, who conducted extensive trade with Iran, acquired a prominent position in the sultan’s entourage and became First Minister.

²¹ Much earlier, the Bahmani forces had used “a gunpowder-based rocket, in 1366.” This technique may have been introduced directly from China (Palat 2015: 83). “The first reported use of mining in siege warfare in India comes from Timur’s campaign in 1398” (Palat 2015: 83). The technique originated in China and was transmitted through the Mongols.

²² Gaborieau 1995a: 452. Aḥmad Shāh Bahmanī claimed to be a disciple of the order’s founder. Two grandsons of the founder made careers in Deccan (Aubin 1988: 86). Moreover, Arabs introduced the Qādiriyya brotherhood around 1422. Newcomers in the Deccan also included members of the Chishtī Sufi order (Lieberman 2009: 723).

century. According to Nikitin, in the Bahmani sultanate, “the great lords are mostly foreigners, and first of all from Khorasan” (Alam and Subrahmanyam 2007: 87). The most famous statesman, whom Nikitin met, was Maḥmūd Gāwān, a scholar and horse trader whose family came from Jilān, near the Caspian Sea. He was “the master of the empire between 1453 and 1481, and minister with the title of chief of the merchants.”²³ He introduced administrative reforms aimed at ensuring direct state control over many districts. Maḥmūd’s brother, Aḥmad, settled in Egypt; one of Maḥmūd’s sons traded with India, while two others, who had studied the Koranic sciences, lived in Mecca. It is obvious that the rise of Maḥmūd Gāwān, originally a merchant from the Persian Gulf, “was inscribed in both the new trade network linking the Red Sea to the Indian Ocean and in the dynamic of statebuilding animating Muslim India during the ninth/fifteenth century” (Vallet 2010b: 676). Sultan Muhammad Shāh III, however, had Maḥmūd Gāwān executed in 1481, an assassination illustrating the great merchants’ vulnerability in the face of political power. This vulnerability, however, has been exaggerated (on this point, see Subrahmanyam 1990b: 44): “It is unclear whether big Asian merchants actually suffered more expropriations than their European counterparts did” (Pomeranz 2000: 169).

In 1425, the capital of the sultanate was moved from Gulbargā to Bidar, a place that the Russian Nikitin visited. The sultanate often held the advantage over Vijayanāgara in the constant wars opposing the two empires. Goa was reconquered, and under the First Minister Maḥmūd Gāwān, the sultanate spanned the Indian peninsula from its west to its east coast. At the end of the fifteenth century, however, the sultanate sank into civil wars, and five smaller sultanates emerged: Bijāpur (1489), Ahmadnāgar, Berar (1491), Bidar (1492), and Golconda (1512).²⁴ These states would maintain strong links with Iran: the founder of the sultanate of Bijāpur himself is said to have been brought to Deccan by an Iranian trader, and the rulers of Golconda boasted of their Iranian origin (Subrahmanyam 1996b: 75).

A “new type of businessman” appeared during the fourteenth and fifteenth centuries, “the merchant-condottiere (the ruler of Honavur, however, built a sultanate that was destroyed by Vijayanagar during the fourteenth century)” (Aubin 1988: 84). We will also encounter these “merchant-condottieri” in insular Southeast Asia (see below).

Maḥmūd Gāwān and his family clearly illustrate the absence, within some sultanates, of any frontier separating politics, trade, and religion. In some Indian states, however, an overall separation remained between a political power drawing its strength from control over land wealth and the economic merchant sphere (Subrahmanyam 2005b: 53). It is within this context that we should understand Sultan Bahadur’s statement from Gujarat: “Wars by sea are merchants’ affairs, and of no concern to the prestige of kings” (Bouchon 1988: 56). This separation, however, has been too often overestimated (e.g. Pearson 2003: 114), and S. Subrahmanyam has rightly criticized this statement of a disinterest in trade on the part of the elites (1996b: 88–89; 2005b: 61–62),

²³ Gaborieau 1995a: 453. Maḥmūd Gāwān called himself “king of the merchants,” a title that Khalaf Hasan Basri had held before him (Subrahmanyam and Bayly 1990: 249–250).

²⁴ The sultanates of Bijāpur and Golconda would be much more sea-oriented than the Mughal state (see Pearson 1991: 97–98; Kulke and Rothermund 1998: 210–211).

going so far as to describe the “development of a mercantilist ideology in the states of the Bay of Bengal” (2005b: 76; see below).²⁵ R. Chakravarti (2001a) also points out that maritime trade was not cut off from the agrarian economy, as has often been suggested. Of course, rulers required horses for their armies and precious metals for coinage. Thus, Lombard’s (1988b: 117) and Mielants’ (2007: 99) opinions, according to which southern Asian merchants either kept themselves out of or were kept out of the political sphere, should be strongly qualified.²⁶ Merchants were precious auxiliaries for the state due to their knowledge of accounting practices, which allowed them to enter the ruling political spheres (Subrahmanyam 1996b: 89). It is true, however, that despite the fascinating successes of some Asian merchant bankers in the political sphere, they were unable to institutionalize the power of their class, unlike what we have noted in Europe (Mielants 2007: 101). In addition, like Palat (1988: 263), Mielants (2007: 100) points out the merchants’ weak control over production processes in the textile industry, during the “pre-modern” as well as the modern period. In India, with the possible exception of Gujarat, one does not observe the kind of putting-out system that was developed in Europe: here there was no “proletarianization” of textile workers by merchants. Textile activity was located in villages and periurban centers more than in towns (Subrahmanyam 1990b: 25). Here again, however, data should be examined region by region: an attempt should be made to differentiate situations according to time periods, and to render “the articulation between village and town” (Goody 1996: 109). Military competition among states created fiscal needs which opened up opportunities for a wealthy class: “at the beginning of the fourteenth century, great families . . . accumulated village headships, taxing rights, and other shares in the produce of the land. These rights were often acquired through loans to the state, to other important families, and, increasingly, to peasants themselves” (Perlin 1985; Pomeranz 2000: 174). In southern Asia, one can see tendencies that have been emphasized for Europe during the sixteenth century. The interpenetration of capitalist families with public finances was even clearer in South India (Perlin 1985; Subrahmanyam 1990b, 1993).

Vijayanāgara: A Hindu Empire Open onto Two Seas

South India developed in apparent opposition to the Muslim states of the north. Founded in 1346 by ancient vassals of the Hoysala kings, the kingdom of Vijayanāgara – whose capital reached 500,000 inhabitants at its peak – marked a cultural Hindu revival²⁷ within the context of a “military state” which would control all of South India (the small principalities along the Kerala coast, such as the city-state of Calicut, remained autonomous, but were still required to pay tribute). Devaraya II (1424–1446) went so far as to launch an expedition against northern Sri Lanka and

²⁵ “In India as in Southeast Asia,” Subrahmanyam and Markovits also write (2009a: 233), “during the fifteenth century, the sea outweighed the land.”

²⁶ While Mielants acknowledges the power gained by some “capitalists” in India (2007: 101), he considers that they remained the exception rather than the rule.

²⁷ The Hindu monk Vidyāranya, who resumed Shankara’s teaching, personified this Hindu revival during the fourteenth century.

forced this region to pay tribute.²⁸ The Vijayanagara court used the Telugu, Kannada, and Sanskrit languages (Lieberman 2009: 729). The rulers used religion to legitimize their power through endowments, tax exemptions for temples (which were sometimes located in disputed regions), and by nominating Brahmins (often Telugu) as fortress commanders.²⁹ “Powerful lineages acquired control over temple administration and landed property” (Champakalakshmi 1996: 71). Relations with the Muslims, however, were complex: the state built itself in the image of sultanates. “The rulers styled themselves as *Hindu-rāya-suratrāna*, which translates as ‘Sultan among Hindu Kings’ . . . and adopted Islamicized forms of dress” (Palat 2015: 78, 108). The empire used “the same administrative techniques and often Muslim officials” (Gaborieau 1995a: 455). Conversely, the Bahmani sultanate also employed Hindus in its administration. King Devaraya II went so far as to employ Muslim instructors in his army. Holders of military “fiefs” (*nayakātana*, *sirmai*, or *amaram*) the *nāyaka*, administrators and judges, provided soldiers for the king by collecting taxes on their territories (on this point, the *nayankara* organization resembled the *iqtaʿ* system of the sultanates and the military tenures of the Kākātīya). The system came with a “centralization of administrative functions in fortified, urban places” (Stein 1982: 121), and officials were now present at the village level. The *nayankara* system – first established in arid zones and forest strongholds³⁰ – functioned alongside a division of the empire into five provinces (*rajya*). As in other regions of India and South Asia generally speaking, “changed conditions of warfare [and competition between states] increased pressures on statebuilders to extract resources more efficiently and to centralize the extracted resources in order to procure strategic goods” (Palat 2015: 115).³¹ This helped weaken the institutions in village clusters (*nādu* or *periyānādu*); it also weakened the position of former regional notables, whereas chiefs previously peripheral now sometimes benefited from the construction of the empire.³² Northern groups, especially Telugu, migrated into Tamil country. Examples are the “warrior-merchants” Baliya, Komati, and nobles of the Reddy caste (Mukund 1999: 44). Along the Coromandel coast, *nāyaka* tended to become “feudal lords” during the late period of Vijayanāgara, often encroaching on temple lands (Karashima 2002) (cf. Hall 2001a: 19). In 1429, a revolt uniting peasants and artisans erupted in Tamil Nadu against “fief” holders and officials of Vijayanāgara, within a context of increasing taxation (and empire expansion) – based on detailed surveys – and abusive extortions. This revolt led to readjustments between

²⁸ An expedition to Sri Lanka had already been launched in 1385. Ferishta mentions a Sinhalese embassy bringing gifts in 1378.

²⁹ Kulke and Rothermund 1998: 195. Brahmins also received land grants and villages. The temples played an important role by investing in agriculture (with irrigation works). From 1500 on, however, this role grew weaker in South India. Temples were no longer major places of production.

³⁰ In what R. Palat terms “zones of military entrepreneurship” (2015: 97). These helped develop agriculture, by building tanks and irrigation works. See Karashima 2002. At times, administrative officials were also granted revenue assignments.

³¹ “The emergence of new warfare technologies raised protection costs and made it imperative for monarchs to extract surpluses more efficiently” (Palat 2015: 105); this sometimes met with substantial opposition.

³² According to B. Stein (2002), the cost of the wars waged by the empire explains its increasing centralization during the fifteenth century. While P. Robb (2002: 64) supports the idea of weak centralization, he acknowledges that the empire collected more taxes than its predecessors had done.

the *nāyaka* and the local elites (Palat 1986: 133, 136). Other protests occurred in 1447–1448. The vision of a military “feudalization” of society advocated by Karashima, however, has been criticized by Rao, Shulman, and Subrahmanyam (1992). Along the Coromandel coast during the fifteenth century, the *nāyaka* attempted to encourage craftsmen (especially weavers) and merchants, by limiting the amount of some taxes, for example (Spencer 2001: 34).

The kingdom of Vijayanāgara expressed an interest in long-distance trade, due to the significance of imports such as precious metals;³³ war animals;³⁴ and, later, guns, as we see in a chronicle written by the Portuguese Fernao Nuniz, around 1530. Vijayanāgara was home to a Muslim community which traded with Arabia, Aden, and the Persian Gulf. This region was key, because it provided horses for the army: they arrived through the ports of Bhatkal, Honavur, and Cannanore. These horses were traded for rice, sugar, iron, and spices.³⁵ ‘Abd al-Razzāq, the ambassador of the Timurid ruler Shāh Rukh in the Persian Gulf and India between 1442 and 1445,³⁶ has pointed out the importance of maritime trade for Vijayanāgara (Subrahmanyam and Markovits 2009: 242). Merchant groups originating in western Asia were present in the capital, especially Hormuzis, who caused ‘Abd al-Razzāq a few problems. “At the beginning of the sixteenth century, the chief of the Muslim community at Bhatkal, the eunuch Nāhuda Qayşar, was a creature of the vizir of Ormuz, Cojeatar” (Aubin 1973: 170). Throughout the empire, importers of horses were freed from taxes. The horses were then sold “with huge profits, which Albuquerque has estimated at between 300 and 500% [at the beginning of the sixteenth century]” (Aubin 1973: 169). Traders sold horses to both camps, Bidar and Vijayanāgara: “At the beginning of the fifteenth century, the Hindu merchants of Nellore sold horses from Ormuz to both Hindus and Bahmanids (who were Muslims),” and Muslim traders did the same (Aubin 1973: 168). In addition, elephants from Sri Lanka arrived at Cannanore. Around 1400, the rulers of Vijayanāgara formed strategic alliances with the sultans of Gujarat and Malwa, in order to tackle the Bahmanid expansion. Vijayanāgara also attacked other Hindu kingdoms. The expansion to the northeast thus led to a lengthy armed standoff with the Gajapati kings of Orissa, who also fought the Bahmani sultanate. India’s central eastern coast (the lower valleys of the Godavari and Krishna Rivers) appears to have been a region disputed among three powers: the Orissa kingdom, the Bahmani sultanate, and

³³ As R. Palat notes (2015: 27), I. Wallerstein (1974b: 41) has (dis)missed the important role of precious metals as currencies in India.

³⁴ Subrahmanyam 1995: 763. Fernao Nuniz “recorded the import of 13,000 horses from Iran and Aden, at the rate of 12 or 13 horses for a thousand gold *pardaos*” (Palat 2015: 77).

³⁵ Bouchon 1975: 29; Pires, ed. Cortesao, 1944: 62. Duarte Barbosa mentions ships leaving Bhatkal for Hormuz carrying large cargoes of iron. At Cannanore, after the payment of a customs duty to the ruler (“every horse pays 25 ducats”), the horses proceeded to the market of Kōṭṭayam, where “merchants from Vijayanagar bought them with gold *pardaos*” (1967 [1516], quoting Ludovico di Varthema 1863: 121). By 1440, the Muslim community on the Malabar coast “would be hostile to attempts made by the Timurids to interfere in their affairs in the Persian Gulf” (Aubin 1988: 85). At the beginning of the sixteenth century, Hormuz traded especially with Bhatkal, the port of Vijayanāgara, and with Cannanore, whose ruler bore the title “lord of the horses” (Bouchon 1975: 26).

³⁶ Shāh Rukh had previously sent ambassadors to Bengal; when they returned, they stopped at Calicut. The ruler of Calicut then dispatched envoys, headed by a Persian-speaking Muslim, to Herat (Alam and Subrahmanyam 2007: 62).

Vijayanāgara. After Kapilendra founded the Sūryavamsha dynasty in 1435, Orissa controlled the eastern coast of India for a while, between Bengal and the mouth of the Kāverī River. While the Gajapati capital was located at Cuttack, the city of Puri seems to have taken on a major cultural role (Subrahmanyam and Markovits 2009: 238). Around 1463, the Bahmani sultanate reached the eastern coast, as it had done around 1425, but soon afterward Orissa recaptured territories as far as the mouth of the Krishna River.

Vijayanāgara fell into decline after Devaraya II, but experienced a revival under the Tuluva dynasty, founded by a former *nāyaka* officer at the end of the fifteenth century.

Trade was active along sea and land routes. As Palat points out, the fact that goods from Cambay were “easily available at Pulicat tends to confirm the existence of busy overland routes” (2015: 169). Part of the Coromandel coast was under the control of Vijayanāgara, with the port of Mailapur and later Pulicat, and that of Kayal, until the mid-fifteenth century: then this region came into the orbit of the kingdom of Kulam (Barbosa 1967, II: 122–123). Tirumalairayanpattinam, in the Kāverī delta, was another significant port. The testimony of ‘Abd al-Razzāq reveals that in the west, along the Kanara coast, Vijayanāgara controlled the ports only tenuously, except in the Mangalore region. Some coastal cities appear to have been more or less autonomous, and Vijayanāgara left the job of tax collecting to local institutions (Subrahmanyam 1990b: 121, 1995: 763). Variations on “merchant republics” were set up in a few ports: at Basrur for example, such a “republic” was ruled by a council of Saraswat merchants; the city maintained its autonomy even when Vijayanāgara strengthened its grasp over the region (Subrahmanyam 1995: 768, according to Diogo do Couto). The main port, Bhatkal, came under the direct control of this empire as of c. 1480. It was home to a cosmopolitan merchant community, including Pardeshī, Nāvayat (Muslims “claiming to be of Persian origin”), Jains, and Hindus. These were ruled by two chiefs appointed by the Vijayanāgara authorities, and they were responsible for collecting taxes (Subrahmanyam 1990b: 123, quoting Barbosa).

Progress in agriculture accompanied colonizing efforts during the fifteenth century. As previously noted, during this period, Vijayanāgara – via the *nāyaka* and other holders of revenue assignments – encouraged the building of reservoirs and irrigation canals, as well as an agrarian colonization movement; they also encouraged craftsmanship, another source of potential revenue (Palat and Wallerstein 1999: 27). “Most of [the king’s] regions are flourishing” writes ‘Abd al-Razzāq in his travel account in Vijayanāgara (Alam and Subrahmanyam 2007: 69). The empire took advantage of the rich agriculture of the east, and the core provided substantial cotton production. We observe the “substitution of high-priced crops for the low-grade crops meant for local consumption, [viewed] as an object of state policy” (Palat 2015: 80). The development of cash crops went along with increased monetization of the economy. ‘Abd al-Razzāq thus mentions the payment of taxes in cash. As in the rest of India, this monetization was helped along by imports of copper and gold, phenomena already noted during the previous period (silver was little employed as currency in South India). Large quantities of copper were imported from Malacca in Pulicat, with the use of copper coins for low-level transactions feeding the demand. Copper from Europe and Africa also arrived on the Malabar coast (Palat 2015: 171). The state’s new

needs certainly influenced the “commutation of taxes in kind to monetary payments” (Palat 2015: 80), a process already begun earlier in the Delhi sultanate. In addition, various industries were expanding. Persian influence and a spreading bureaucracy led to changes in clothing fashions, triggering growth for the textile industry. Looms were improved. Muslim weavers settled in South India and obtained production monopolies over some types of fabric (Ramaswamy 2002: 433). The migration of weavers into Tamil country was encouraged (Palat 2015: 135, 139). In general, in connection with expanding long-distance trade and urban development, the weavers’ status improved at this time along the Coromandel coast, with privileges granted to the Kaikkolar, a guild of weavers “which replaced the Saliyar as the dominant weaving community in the Tamil Nadu region”; this guild enjoyed ritual privileges, and its members sometimes acted as temple managers (Ramaswamy 1985: 58ff., 105, 107).³⁷ Inscriptions reveal that weavers were involved in monetary loans, and were at times employed as soldiers. One notes both the production of a larger variety of textiles and increasingly specialized industrial processes (Ramaswamy 1985: 64–67), within the context of ruralized production.³⁸ An active trade developed, not only with other countries, but also within the empire. The Coromandel coast exported cotton cloth and silk to Southeast Asia (see below) and western India. Barbosa (1516) thus notes “the popularity of Pulicat textiles in Gujarat and Malabar” (Ramaswamy 1985: 69), and the wealth of the Chetti merchants of the Coromandel coast, who are the owners of “large ships which they call *jungos*” (Ramaswamy 1985: 72). The *ikat* technique expanded, perhaps from the northern Coromandel; reciprocal influences were seen between Indonesia and eastern India (Ramaswamy 2002: 435) (the *ikat* technique has long been in use in India: the term *patola*, which refers to clothing made using this technique, has been found in a book from the first century CE, entitled the *Lalitavistara*, and paintings from Ajanta also appear to depict *ikat*).³⁹ As previously noted, Vijayanāgara also exported rice and sugar via its western (Bhatkal and Basrur) and eastern ports (Pulicat, Nāgapattinam), toward the Persian Gulf, Yemen, East Africa, Sri Lanka, and Southeast Asia. From India’s western and southwestern coasts, spices, precious stones, and teak (used for shipbuilding in the Persian Gulf and South Arabia) were also carried eastward, especially to China (Bouchon 1999: 45).

This period saw the rise of merchant families and master craftsmen, which led to a weakening of the ancient guilds – this was also due to increased centralization of the state.⁴⁰ These merchant families used “state connections to gain lucrative concessions”: “the merchant spirit” of city-states such as Hormuz and Malacca also developed in the

³⁷ In Chola times, the term “Kaikkolar” seems to have “denoted a military function” for personnel assigned to the palace or to temples (Heitzman 1997: 150). The preeminence of the Kaikkolar “may have compelled the Saliyar to migrate to the Malabar coast” (Palat 2015: 134). Moreover, these Kaikkolar spread into the Telugu and Kannada countries.

³⁸ Palat notes that growing fragmentation in production processes went along with “greater degrees of manual dexterity by craftsmen” (2015: 141).

³⁹ Alam 2002. It is impossible to fix an origin for this technique in time or space. Gujarat, especially, also developed this technique, as did Yemen, where it had been known since the ninth century (Clarence-Smith 2005).

⁴⁰ Subrahmanyam and Bayly 1990: 247. V. Ramaswamy (1985: 82–83) is opposed to the idea of a decline of the guilds in South India, but no inscriptions attest to the presence of trading organizations after the

empire of Vijayanāgara and in other agrarian states of southern Asia (Subrahmanyam 1993, 1995; Pomeranz 2000: 175). Wealthy weavers were able to purchase land, and entered the administration of temples. For Goody (1999: 122), textile manufacturing was a “proto-industrial” sector at this time in India’s most productive regions (slightly later, we see the same “proto-capitalist” development in the sugar industry in Bengal and in shipbuilding at Surat) (Goody 1999: 143). An inscription from Tirupati (Andhra) (1538) provides some “evidence of the merchant’s control over the productive processes,” since they were able to impose specifications on the weavers, with the state’s agreement (Ramaswamy 1985: 67). Here we observe a kind of “putting-out system” (Goody 1996: 109). In Tamil Nadu, the concentration of a large number of looms by master-weavers who were also merchants reflects a process of incipient industrialization: an inscription from Kunnatur (district of Chingleput) says that “[a weaver] – who had set up an image in the temple – . . . should pay 4 *panams* on every loom set up [on a site] . . . The prefix before his name is the nomenclature of a trading group . . . The existence of master-weavers is also [shown in] an inscription from Velpamadugu (district of Anantapur) (1526). [It mentions] a tax of 3 *panams* levied on a loom, [but] if ten looms were kept by a single family, only nine were to be taxed” (Ramaswamy 1985: 84–85). Documents dated to the late fifteenth century relating to the kingdom of Alamkonda mention merchants owning between 65 and 100 looms. However, the development of the textile sector noted above – sometimes debatably labeled “proto-capitalism” – was hampered by the lack of outlets for capital, since a significant part of the population was excluded from the market; the existence of non-free workers and the “abundant supplies of ritually impure landless laborers”⁴¹ certainly limited progress in both the domestic market and in innovation (Bayly 1983; Pomeranz 2000: 176; Palat 2015: 131).

The Tamils of the Coromandel coast were quite active along maritime routes. Ferrand (1922b: 28) has noted the cartographic activity of the Chola, by relying on Sulaymān al-Mahri, who borrowed data from Chola sailors (Pelliot 1933: 328). From the port of Pulicat, especially, the Chola exported textiles and rice to insular Southeast Asia, and first of all to Malacca, where the Portuguese would describe the power of their merchants, who prefigure the “portfolio capitalists” described by Subrahmanyam for ensuing centuries.⁴² Textiles were also carried to the mouth of the Irrawaddy River and the port of Martaban in the state of Pegu, as shown by the Portuguese chronicler António Dinis in 1516 (Subrahmanyam 1990b: 98). In addition, the Coromandel coast exported iron, indigo, diamonds, and slaves. This region benefited from the productivity of wet rice cultivation, which allowed for high population densities, and freed the

fourteenth century (Champakalakshmi 2001: 343). In various regions, the significance of Muslim networks contributed to the disappearance of the guilds’ power.

⁴¹ Palat 2015: 131. Palat argues that slavery was not a significant form of labor exploitation due to the abundance of these “landless laborers.”

⁴² These “portfolio capitalists” were “entrepreneurs who occupied ‘the middle ground between mercantile capitalism and political capitalism’ (Subrahmanyam 1990b: 298), gaining and using political positions to further commercial interests, harnessing commercial operations to gain political influence” (D. Rudner 1994, <http://ark.cdlib.org/ark:/13030/ft88700868/>). For R. Palat, however, “the ‘portfolio capitalists’ transformed themselves into landlords rather than into a capitalist class, ‘through buying or fighting their way into land rights’” (2015: 21; Subrahmanyam and Bayly 1988: 416).

labor force for non-agricultural activities. Large populations “meant that there were no tendencies toward the development of labor-saving devices . . . and even precision tools: . . . technological improvements tended to be labor-intensive . . . The emphasis was on the acquisition of greater manual dexterity through a more thoroughgoing specialization of labor. This has been labeled an ‘industrious revolution’” (Palat 2015: 5, 219).⁴³ The grip of Vijayanāgara over the region encouraged the rise of Pulicat. As previously noted, the Muslim community of the Maraikkayar played a major role in trade, especially in the ports of Kilakkarai (a site for pearl fisheries) and Kayal, where Barbosa highlights the simultaneous presence of Hindus and “Moors” (Subrahmanyam 1990b: 95).

The Sinhalese still held a significant position in long-distance trade under Parākramabāhu VI (1412–1467); this king sent five embassies to China between 1412 and 1459. However, the kingdom was affected by a rebellion in 1463, and after Parākramabāhu’s death in 1467, the political situation was unstable.

Along the Malabar coast, the merchants held a significant place in smaller independent kingdoms taking part in trade.⁴⁴ Muslim Māppiḷa or Pardeshī merchants and Hindu traders were active in both the western and eastern Indian Ocean. The Pardeshī played a major role in transoceanic trade. The Māppiḷa – who lived mostly in the regions of Cannanore and Ponnani – instead committed themselves to trade within India, in Sri Lanka (where they dominated the cinnamon trade), and along the Coromandel coast; they also traveled to Hormuz, Aden, Sri Lanka, and Malacca (Bouchon 1975: 33, 1988: 54). In addition, they controlled the Laccadive Islands and probably the Maldives. In Cannanore, Indian communities such as the Gujaratis appear to have been included in the category of the Pardeshī. At the beginning of the sixteenth century, the wealth and power of the great merchants came together in the figure of Mamalli of Cannanore, who belonged to a family of leaders of the Māppiḷa community of Eli and Cannanore.⁴⁵ Mamalli was in fact a title. If it is true that this title was granted to a Nāyar, the king’s minister, who had converted to Islam, “the rise of the Muslim chiefs to power” may go back as far as the late eleventh century (Bouchon 1975: 36–37).⁴⁶ The situation during the sixteenth century was new in the sense that Mamalli competed with the king’s power. As early as 1494, he established a tutelage over the Maldives, exerting a monopoly over the supply of coir.⁴⁷ He

⁴³ This term was coined by A. Hayami (1986). See de Vries 2008: 78; Sugihara 2003, 2004.

⁴⁴ Ma Huan notes the minting of gold and silver coins by the chiefs of Golan (Quilon); Gochin (Cochin); and Goli (Calicut). At times, these small states were required to pay tribute to Vijayanāgara: an example is Calicut, under Devaraya II’s reign (1424–1446).

⁴⁵ During the first half of the fifteenth century, Muslims were ranked second among the five social levels Ma Huan distinguishes: they were just below the Hindu elite.

⁴⁶ The Nāyar (Nair) formed a politically dominant group alongside the Perumal kings of Kerala (800–1102); they headed small kingdoms from the twelfth century onward. Muslim notables “maintained close relations with the dominant landholding caste of the Nāyar” (Wink 2004: 206).

⁴⁷ The dominant presence of Māppiḷa merchants in the Maldives may go back to the eleventh century, if we accept the *Muṣakavamsa*’s testimony, which dates to this period (Bouchon 1975: 50). In the Maldives, Mamalli appears to have been a kingmaker; acting as suzerain, he obtained a tribute which was worth half of the revenues of the islands. Due to the Portuguese settlement on the Malabar coast and the blockade of Calicut, the Maldives were of increasing interest: the islands became an essential venue for contact between merchants from Southeast Asia and those from the western Indian Ocean (Bouchon 1975:

coordinated acts of resistance against the Portuguese, summoning troops at Calicut and gathering a small fleet of warships from Gujarat (Digby 1982b: 156). The ideological dimension of the resistance led by Mamalli has often been exaggerated. Mamalli was primarily a merchant, threatened by the intrusion of the Portuguese, who at times seized his vessels, wrecked the horse trade of Cannanore, and attempted to prevent Mamalli from controlling the Maldives. At the same time, Mamalli traded with the Portuguese at Cannanore. He took advantage of their dissensions and of changes occurring, for example, following Albuquerque's death in 1514. In 1518, Mamalli signed a treaty with the Portuguese which left him in control of the revenue of half of the Maldives (Bouchon, 1975: 156).

Besides Cannanore, Cochin was another major trading place. It could not compete with Calicut, however, which had become the most significant port along India's southeastern coast, in part due to a policy implemented by the rajas that protected foreign merchants (who were often Muslims). Described by Ma Huan as "the great port of the western ocean," Calicut was already the destination for the Chinese treasure ships participating in Zheng He's first expedition. This port clearly benefited from preferential treatment. The second Chinese expedition erected a commemorative plaque in Calicut. According to Ma Huan, two Muslim chiefs administered the country and were responsible for overseeing purchases and sales during visits by the Chinese treasure ships; Indian and Chinese officials set exchange values for the products, in writing. It is likely that the Chinese brought the first firearms into India, via Calicut. Around 1440, the Persians were calling sailors from Calicut "the China boys" or "the sons of the Chinese" (Digby 1982b: 134).⁴⁸ As Ma Huan has pointed out, this port was visited by ships "from all places." Pepper appears to have been stored there and sold under official supervision.⁴⁹ Calicut also exported cloth, exchanged for horses. Pires mentions a sizeable silk production in Calicut, a fact already noted by Ma Huan. From Calicut, one sailed to Hormuz, Zafar, or Aden.⁵⁰ 'Abd al-Razzāq writes that Calicut is "equal to Hormuz in its mercantile population from every land and region and the availability of rarities of all sorts from the Persian Gulf, especially the realm of Zerbād, Abyssinia and the Zanj country" (Thackston 2001: 72). Taxes were levied on imports at one-fortieth of their value, and only on sales (Alam and Subrahmanyam 2007: 64). Taxes appear to have been lower there than they were elsewhere. Ramaswamy (1985: 80) gives the following comparison of taxes: Cochin (4 percent at mid-sixteenth century), Malacca (3 or 6 percent, writes Pires), Hormuz (10 percent, according to 'Abd al-Razzāq), and Pegu (12 percent, according to Pires).

120–121, 152 n. 20). Mamalli's success arose from his control over this Maldivian regional hub and from his presence in Sri Lanka.

⁴⁸ Calicut was home to a group of Chinese of mixed origin, called *čini-bačagān*.

⁴⁹ Mills 1970: 49, 137ff. The price of pepper appears to have been set by the authorities. Ma Huan points out the role of *chedi* (*Chettiar*, Chettis) merchants, probably from the Coromandel coast, in the trade of gems and pearls. He notes the existence of an inland route running from Calicut to Kanbai (Koyampadi = Coimbatore).

⁵⁰ Ma Huan indicates sailing times of twenty-five days, ten days, and one month, respectively, for these destinations (Mills 1970: 151, 154, 165). Gongzhen, Zheng He's secretary during his last expedition, mentions the arrival of envoys from Mecca at Calicut in 1432.

According to Barbosa, Calicut was one of the largest shipbuilding centers in the world. The city was famous for building “keeled ships [of 350 to 400 tons];⁵¹ these ships were built without nails, but all the sheathing was sewn” (Barbosa 1967: 76).

While Calicut requested the establishment of diplomatic exchanges with the Timurids, Barbosa also pointed out relations with the Red Sea: “Every monsoon, ten or fifteen of these ships sailed for the Red Sea” (Barbosa 1967: 77). They departed from Calicut in February, and returned between mid-August and mid-October. The merchants took with them

pepper, ginger, cinnamon, cardamoms, myrobolans, tamarinds, precious stones of every kind, pearls, musk, ambergris, rhubarb, aloes-wood, great store of cotton, porcelains, and some of them took on at Juda copper, quicksilver, vermilion, coral, saffron, colored velvets, rose water, knives, colored camlets, gold,⁵² silver and many other things which they brought back for sale in Calicut. In this trade, they became extremely wealthy. And on their return voyages they would bring with them other foreign merchants who settled in the city, beginning to build ships and to trade; on this the king collected heavy duties. (Barbosa 1967: 77)

Ma Huan describes the administration of trade by the authorities in these terms:

[When a ship arrives], the king sends a chief and a Waligi Cheti [*Valikkar*] to examine the account books; a broker comes and joins them . . . They take [all the] goods which have been brought there, and discuss the price of them one by one; and when the price has been fixed, they write out an agreement stating the amount of the price. (Mills 1970: 140)

Barbosa later writes:

As soon as any of these merchants reached the city, the king assigned him a Nayre [Nāyar], to protect and serve him, and a Chatim clerk to keep his accounts and look after his affairs, and a broker⁵³ to arrange for him to obtain such goods as he had need of, for which three persons they paid good salaries every month. (1967: 77)

During the sixteenth century, “foreign merchants lived in demarcated areas and were headed by a leader chosen from among themselves, as well as in the Persian Gulf” (Barendse 2002: 46–47; Palat 2015: 170).

Ludovico di Varthema describes a great variety of vessels (1863: 154): “*Sambuchi*,” “*Capel*,” “*Parao*,” and “*Chaturi*.” The request made by the Zamorin of Calicut to Cabral in 1501 reveals the large size of some vessels plying the western Indian coast: this ruler asked the Portuguese to seize a vessel from Cochin which carried seven elephants and 300 men-at-arms (Matthew 1997: 29).

According to Pires (Cortese 1944, 1: 87), Quilon (Kulam) was also a major port along this coast: the main king of Sri Lanka “was always a tributary of the king of Quilon [Kulam].” Barbosa notes: “Hither come Moors, Heathen and Christians [Nestorians] in great numbers. The Moors and Heathens are great traders and possess many ships in which they sail in all directions, to Charamandel [Coromandel] and Ceilam [Sri Lanka], to the Isles [Maldives?], to Benguela [Bengal], Malaca, Çamatra

⁵¹ The dhows of the western Indian Ocean usually had no keels.

⁵² Gold circulated primarily as coins (ducats from Venice, ashrafis from Egypt).

⁵³ The existence of brokers in the textile trade is attested as early as the thirteenth century (Ramaswamy 1985: 85).

[Sumatra] and Pegu, but they trade not with Cambay. Here there is great store of pepper” (1989, 11: 97).

As already noted, horses were imported in great numbers during the fifteenth century. In addition, firearms appeared in India and throughout the Indian Ocean. Gujarati soldiers carried muskets as early as 1475.⁵⁴ Around 1520, the great Māppīḷa merchant Mamalli of Cannanore was supplying the king of Kotte (Sri Lanka) with cannons (Digby 1982b: 151).⁵⁵ At Hormuz, in 1516, the ruler “had 80 small artillery pieces, but no musketeers” (Barendse 2000: 210). The Portuguese praised the quality of the guns and cannons produced in India. Firearms were rarely decisive in battles, however (Palat 2015: 73, 81).

The Sultanate of Bengal: An Indian Form of “Mercantilism”?

The importance of the Coromandel coast in trade with Southeast Asia and China has been pointed out. Bengal also had a large share in this maritime trade, exporting cotton and silk textiles via the port of Sonārgāon (silk fabrics were now produced in Bengal).⁵⁶ According to Varthema, fifty ships left Bengal every year loaded with “cotton and silk stuffs” that went “through all Turkey, through Syria, through Persia, through Arabia Felix, through Ethiopia and through all India” (1863: 212). The sultanate also exported rice and sugar, notably to Malacca and Sumatra. Sonārgāon was one of the places where coins were issued,⁵⁷ along with Sātḡāon, another market town and administrative center, and the capital of Bengal Lakhnautī (Gaur).⁵⁸ The sultans regularly issued silver coins between the fourteenth and sixteenth centuries (the metal came from Yunnan and Burma), and Pires notes the 25 percent profit realized by the Chinese and other merchants from importation of this metal at Malacca. Ma Huan indicates a twenty-day sail from Poulo Weh to Chittagong, whence the Chinese of Zheng He’s fleet appear to have used smaller ships to travel to Sonārgāon (Mills 1970: 159–160). Chinese sources mention the building of ships in Bengal at the end of the fourteenth and during the fifteenth century. The Bengalis probably built both sewn ships and vessels of the “junk” type: at the beginning of the sixteenth century, the Portuguese describe some vessels from Bengal as “junks,” whereas others are said to be built “according to Mecca’s way.” The Bengalis traveled as far as China, via Malacca:

⁵⁴ Firearms may have been used by Indian soldiers in Burma at the end of the fourteenth century (Reid 1993b: 12), and at the battle of Malwa in 1421 (Palat 2015: 85). However, Palat emphasizes that “early muskets were marginally useful for infantry, and useless for cavalry warfare” (2015: 219).

⁵⁵ The Portuguese claimed to have seized 3,000 firearms when taking Malacca, including a large bombard, a gift from the king of Calicut (Reid 1993b: 12). Weapons came from China, but Malacca also produced firearms. When the Portuguese seized Goa, they found guns and mortars, brought there by the Turks.

⁵⁶ Ibn Battūta, however, does not mention silk as a product of Bengal, and G. Bouchon (1999: 46) argues that production during the fifteenth century was for domestic consumption. Ma Huan mentions silk, in 1432, among “five or six kinds of exquisite fabrics” produced by this country (Mills 1970: 162–163). Asian silk came primarily from China and Persia, where sericulture was well developed. On the importance of Bengali textiles for the Indonesian market, see Digby 1982b: 143, quoting Barbosa and Pires.

⁵⁷ Alongside silver money, Ma Huan emphasizes the importance of cowries, which were used as units of account in trade (Mills 1970: 161).

⁵⁸ During the second half of the fourteenth century, the capital shifted from Lakhnautī to Pandua, where a large mosque was built in 1368; the capital returned to Lakhnautī during the mid-fifteenth century.

fourteen diplomatic and commercial Bengali missions were sent between 1404 and 1439; they sometimes traveled on ships owned by the sultan. The most expensive exports from Bengal to China were horses: “each cost 1,000 gold coins” (Chakravarti 1999: 204, Palat 2015: 77). Bengal was also trading – directly or indirectly – with East Africa. In 1414, a ship from Bengal presented the first giraffe ever known in China to the Chinese court, brought by envoys from Malindi.⁵⁹ During the second half of the fifteenth century, “Abyssinian” slaves (Habashī) were present in great numbers; they were in particular assigned to guarding the royal palace⁶⁰ and some of them climbed to the highest ranks in the administration. One of them assassinated the sultan and set up his own dynasty (1487–1493). Ousted from power in 1493 by a popular revolt, most of the Habashī migrated to Gujarat and Deccan. While legend suggests that ‘Alā’ ud-Dīn Husain Shāh, who took power in 1493, was the descendant of a sharif from Mecca, the founder of the dynasty lived in a town in Turkestan. However, Pires writes that “from that time up to now it has always been Abyssinians – those who are very near to the king – who have reigned [in Bengal]” (1944, 1: 88), perhaps due to the maintenance of a Habashī presence in the royal guard.

The majority of the population of Bengal converted to Islam, in a process still poorly understood, but reflecting “the prestige and utility of Muslim conventions” (Lieberman 2009: 673). During the fifteenth century, Sufi “paths” developed, with Iranian inflows, similar to those in western India (the Chishtiyya and the Qadiriyya were present). Ma Huan, a Muslim himself, indicates that in Bengal, “throughout the whole of the country the people are [indeed] Muslims” (Mills 1970: 160).⁶¹ At the beginning of the sixteenth century, the Portuguese note an Iranian presence not only in Bengal, where Persian was the court language, but also in Burma, in the ports of Dagon, Cosmin, and Martaban, and as far away as Thailand (Subrahmanyam 2005b: 54, 57). A Sufi called Pir Badr, who died in Bihar around 1440, became the patron saint of sailors after his death. At the same time, the sultans “patronized Bengali literature as well as their architecture. Muslim–Vaisnava syntheses took root and Bengali provided a medium for translated Persian and Arabic texts” (Lieberman 2009: 731).

Ma Huan points out the number of “wealthy individuals who build ships and go to various foreign countries to trade” (Mills 1970: 160). The sultan himself engaged in trade, sending men to buy “pearls, precious stones and local products.”⁶² “Ray has noted a merchant envoy (from Bengal to China) named Said Muhammad, who was active during the first two decades of the fifteenth century, and who then served as courtier to about five different sultans of Bengal” (Das Gupta 1991: 357). Court notables

⁵⁹ The following year, ambassadors from Malindi presented another giraffe (see above). The Ming emperor Yongle had these ambassadors carried home by an expedition: it was sent as far as East Africa (Mills 1970: 155 n. 10).

⁶⁰ The sultan Rukn al-Dīn Bārbak Shāh (1459–1474) maintained 8,000 Africans of servile origin for military purposes (Burton-Page 1971: 15; Pescatello 1977: 27).

⁶¹ Ma Huan’s text points to a Persian influence in the Bengali culture (some people spoke Farsi). A Persian cultural influence existed even further east, in the kingdom of Arakan (Subrahmanyam and Markovits 2009a: 233).

⁶² Mills 1970: 165. “Those who go abroad to hire themselves out as servants are also numerous” writes Ma Huan.

were also involved in long-distance trade, and Subrahmanyam even writes of a “state ‘mercantilism’” for Bengal (2005b: 48, 76) (the term “mercantilism” here referring to a policy of relying on and fostering trade). Many foreign merchants (Persians, Rumes, Turks, and Arabs, as well as Indians from the western Indian coast) visited Gaur and Satgaon, the main Bengali centers (Pires, ed. Cortesão, 1944, 1: 91). While the Bengali trade declined during the early sixteenth century under Gujarati supremacy, the Bengalis remained active in insular Southeast Asia; they formed a sizeable part of the population of the city of Pasai at that time (Bouchon 1999: 48). According to Pires, Bengalis “sail four or five ships and junks to Malacca and Pase every year . . . They leave [Bengal] on the first of February [and come back from Malacca] at the beginning of August” (1944, 1: 92–93). Despite a high rate of taxation (“every merchant has to pay three on every eight”), the journey is “of great profit.” The merchants left with silver and returned with gold, because “gold is worth a sixth part more in Bengal than in Malacca and silver is a fifth part cheaper than in Malacca, and sometimes a quarter cheaper” (1944, 1: 93). The silver from Bengal came from Pegu, where it was slightly cheaper. Pegu’s silver probably explains the regular visits there of ships from Gujarat, which also acquired lac, in exchange for textiles, copper, and opium (1944, 1: 100–101). Persian merchants were also present.

Moreover, the Maldives acquired a significant position due to the increasing use of cowries in Africa, Bengal, and Southeast Asia. A Portuguese document from 1505 notes the yearly arrival of “five or six large ships from Bengal, bringing rice, silk, gold, silver and cotton fabrics,” for exchange against cowries. Barbosa writes: “To these islands come many ships of the Moors from China, Maluco [Moluques],⁶³ Pegu, Malacca, Sumatra, Bengal and Ceilam, in their passage to the Red Sea.”⁶⁴ The Portuguese would soon take part in this transport of cowries, which they used in their African trade.

India’s balance of trade was largely positive with western Asia and Egypt during the fifteenth and sixteenth centuries (as it had been in earlier times). In contrast, Frank and Gills state that the trade balance was negative with Southeast Asia and China during the sixteenth century, with India reexporting silver to the Orient (Frank and Gills 2000: 7–8). It is uncertain whether the same situation prevailed during the fifteenth century, or during the previous period of the Delhi sultanate.

For India, a new era began in 1526 when Bābur, a Turkish king from Kabul who was a descendant of Tamerlane, conquered northern India and founded the Moghul Empire.

Throughout the fifteenth century, India’s trade remained more significant in the eastern than in the western Indian Ocean. It was conducted not only by petty

⁶³ Amerigo Vespucci was the first European to refer to the Moluccas as “Maluca” (Thomaz 2009: 165); these islands were known to him thanks to a conversation with a Jew from Calicut whom he met in Cape Verde in 1501. The name “Maluku” appears in Ibn Mājid’s *Book of the Benefits of the Principles of Seamanship* (c. 1488) (Thomaz 2009: 165).

⁶⁴ Quoted by Vogel 1993: 225. Different species seem to have been used: Pires notes that Pegu, Arakan, Martaban, and Thailand used cowries that were smaller [*Cypraea moneta*] than those valid in Bengal and Orissa [*Cypraea annulus*] (Vogel 1993: 229). Ma Huan has also mentioned exports of cowries as well as coir: “men come from every place on foreign ships to purchase [coir and ropes made of coir].” In addition, he notes the production of embroidered silks in the islands (Mills 1970: 149–150).

Illustration XXXIII

Blue-and-white porcelain: cultural exchanges (fifteenth century)



(a) Storage box for ink and pens with Arabic and Persian inscriptions, blue-and-white porcelain. Zhengde period (1506–1521), Ming China. Ernest Grandidier Collection, Musée Guimet, Paris, no. G4458. © RMN-Grand Palais, Ravaux



(b) Plate with two pomegranates; ceramic imitating Chinese blue-and-white porcelain, fifteenth century, Timurid dynasty, Iran–western Asia, Louvre, no. MAO868. © RMN-Grand Palais, Hervé Lewandowski

Illustration xxxiv

China and trade in the Indian Ocean (fifteenth century)



Giraffe presented to Ming Emperor Yongle by the African city of Malindi, 1414; author unknown; ink and paint on silk, 80 x 40.6 cm, Philadelphia Museum of Art, donated by John T. Durrance, no. 1977-42-1. © Philadelphia Museum of Art

Illustration xxxv

The crossroads of Southeast Asia (fifteenth century)



(a) Printed cotton textile, manufactured in Gujarat and exported to Sulawesi, fifteenth century. The decoration shows geese, floral motifs, and medallions. Newberry Collection, Ashmolean Museum, Oxford, EA1995.61. © Ashmolean Museum, Oxford



(b) Plates inserted into the wall surrounding the tomb of Sunan Bonang, one of the propagators of Islam at Tuban, northern coast of Java, early sixteenth century. Sunan Bonang was partly of Chinese ancestry. Eastjava.com/books/glorious/html/tuban/html

Illustration xxxvi

India: architecture as symbol of power (fifteenth century)



(a) Friday mosque at Gulbarga, capital of the Bahmanid Empire. © Art Resource, NY



(b) Virupaksa temple, at Hampi (Vijayanagara), dedicated to Shiva. © Marjorie Lang

Illustration xxxvii

Timurid art



Assembly of scholars, after *Bustān* (The Orchard) by Saadi (1257). Miniature by Bihzad, Herat, 1488, MS Ar. Farsi 908, National Library Cairo, Egypt. © Erich Lessing

Illustration XXXVIII
The Silk Roads (fifteenth century)



Procession along a Silk Road, Tabriz, c. 1470–1490?, MS H2I53, fol. 130a, 24 x 43 cm. © Topkapi Sarayı Müzesi, İstanbul

Two Indian Ocean ports: Calicut and Aden



(a) City of Aden, in G. Braun and F. Hogenberg, *Civitates Orbis Terrarum*, 1572. © Courtesy of Historic Cities Research Project: <http://historic-cities.huji.ac.il>, The National Library of Israel, Shapell Family Digitization Project, Eran Laor Cartographic Collection, and The Hebrew University of Jerusalem



(b) City of Calicut, in G. Braun and F. Hogenberg, *Civitates Orbis Terrarum*, 1572. © Courtesy of Historic Cities Research Project: <http://historic-cities.huji.ac.il>, The National Library of Israel, Shapell Family Digitization Project, Eran Laor Cartographic Collection, and The Hebrew University of Jerusalem

Illustration XL

The Ottoman Empire (I)



(a) King wearing a Phrygian cap, holding a flower, Oc Eo, between the second and fifth centuries. © École Française d'Extrême-Orient, Paris

“Anyone wishing to contemplate the Glory of God should look at a red rose” (Abu Bakr al-Wāsitī, tenth century)



(b) Portrait of Mehmet II smelling a flower, c. 1480, Turkey, 39 x 27 cm. Attributed to Shiblizade Ahmed. © Topkapi Sarayi Müzesi, Istanbul

Illustration XLI
The Ottoman Empire (2)



Astronomers in the Istanbul observatory, sixteenth century. Istanbul University Library, MS F1404, fol. 57a. © Art Resource, NY

Illustration XLII

The Portuguese irruption into Africa



(a) Salt box, depicting Portuguese soldiers, topped by a ship. Edo, Nigeria.
© The Metropolitan Museum of Art,
Dist. RMN-Grand Palais / Stan Reis

(b) Portuguese fortress at Kilwa, 1505.
© Heinz Ruther, African Cultural Heritage
Sites and Landscapes Database,
University of Cape Town



Illustration XLIII

A Genoese map of the world (1457)



This map takes into account data collected by Niccolò dei Conti, who returned from the Indian Ocean in 1444; the Moluccas are mentioned for the first time, under the names Sanday and Bandam. The Indian Ocean is no longer viewed as a closed sea as was the case in Ptolemy's conception. © Biblioteca Nazionale Centrale, Florence

Illustration XLIV
Mappa mundi by the Venetian Fra Mauro (1459)



Somewhere between medieval and modern maps in appearance (Palsky 2009), Fra Mauro's *mappa mundi* made use of testimonies by travelers such as Marco Polo and Niccolò dei Conti. North of Java Major, the island of Cimpagu is Japan. The southern tip of Africa is correctly drawn. It has been suggested that Fra Mauro knew of Chinese or Korean maps. Madagascar is shown under the name Diab (Sanskrit *diva*, "island"). A town in Madagascar bears the name Macdasia. © Ministero per i Beni e le Attività Culturali. Biblioteca Nazionale Marciana, Venezia, Divieto di riproduzione

The “Cantino” map



Copy of the Cantino map, 1502, Biblioteca Estense, Modena, Italy. Alberto Cantino smuggled the map out of Portugal and into Italy in 1502. The map shows a dividing line between Portugal and Spain that runs across South America, as per the Treaty of Tordesillas (1494). The island of Madagascar, discovered in 1500, appears on the map. © Royal Geographical Society, London / Bridgeman Images

Illustration XLVI
East Africa (fourteenth and fifteenth centuries)



(a) The ruins of Great Zimbabwe, walls and conical tower, fourteenth century. © Heritage Image Partnership Ltd / Alamy Stock Photo
(b) The “House of the Mosque Keeper,” showing doorways made of carved coral, and niches. Shela, Lamu, Kenya, sixteenth century? © Eric Lafforgue / Alamy Stock Photo

Illustration XLVII

East Africa

(a)



(b)



(a) Tomb with enclosure, showing wings and a pillar. The pillar (b) had Chinese ceramics inserted into it. Kunduchi (Tanzania), sixteenth or seventeenth century. Pillars with the same shape were known in Mamluk Egypt. This type of tomb was also erected in the Comoros and in north-western Madagascar (see Horton 1996a: 74, fig. 34). © Thomas Vernet



(c) Copper croissettes, from the Congo/Zambia, border, and from the region of Ingombe Ilede (for the latter, H.: c. 30 cm). These croissettes were used as currency in regional exchange networks in the Congo, Zambia, and Zimbabwe, from the ninth century onward. © www.coincoin.com

Illustration XLVIII

Cemeteries of northwestern Madagascar: tombstone and tombs (fifteenth century)



(a) Kingany, tomb II.8. Plaque of carved coral depicting a mihrab with a hanging lamp. On either side of the lamp and along the vertical frame, stylized lotus flowers reflect an Indian influence (P. Vérin). © Musée d'Art et d'Archéologie, Antananarivo



(b) Langany. Tomb (S VI 2) with wings and panels, and a pillar (*monara*) on its eastern side. © Musée d'Art et d'Archéologie, Antananarivo

Illustration XLIX

Cemetery of Vohemar (northeastern Madagascar):
Chinese and Indian influences (fifteenth century)



(a) Plate, celadon, with flower decoration, Vohemar, fifteenth century (?), 4I-I-27, tomb C-62. Photo: P. Beaujard. © Musée d'Art et d'Archéologie, Antananarivo

(b)



(d)



(c)



(b, c) Carnelian beads (d) Chalcedon bead. © Musée d'Art et d'Archéologie, Antananarivo / Bako Nirina Rasoarifetra

Illustration L

Cemetery of Vohemar: Chinese blue-and-white porcelain (fifteenth century)

(a)



(a, b) Small plate, Chinese blue-and-white porcelain, fifteenth century. The well shows a decoration including a stylized dragon. On the underside (b), within two circles, are four Chinese characters meaning "Long life, wealth, and honor." Diam.: 14.2 cm. Excavations at Vohemar, 1941. Musée du quai Branly 71.1949.12.23. Donated by the Académie Malgache. © Musée du quai Branly – Jacques Chirac, Dist. RMN-Grand Palais

(b)

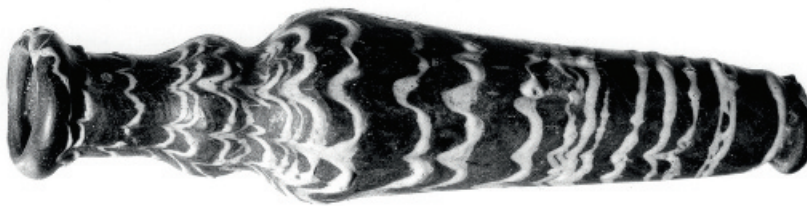


Illustration LI

Cemetery of Vohemar: weight, glass, and mirror (fifteenth century)



(a) Cone-shaped stone weight, bearing an inscription in Arabic: "one quarter." Diam.: 5.4 cm. Musée du quai Branly. © Musée du quai Branly – Jacques Chirac, Dist. RMN-Grand Palais



(b) Opaque black glass vial, with wavy white stripes. Excavations at Vohemar, 1941, Musée du quai Branly, 71.1965.4.92. © Musée du quai Branly – Jacques Chirac, Dist. RMN-Grand Palais

(c) Chinese bronze mirror. Excavations at Vohemar, 1941. Diam.: 14.9 cm. Musée du quai Branly, 71.1949.12.109. © Musée du quai Branly – Jacques Chirac, Dist. RMN-Grand Palais



Illustration LII

Cemetery of Vohemar: box made of bone and mother-of-pearl spoon



(a) Cylindrical box made of bone, with incised decoration showing palm trees, as well as floral and geometric motifs. H.: 5.2 cm, Diam.: 4.9 cm. Excavations at Vohemar, 1941. Tomb C57 a. Musée du quai Branly, 71.1949.12.80. © Musée du quai Branly – Jacques Chirac, Dist. RMN-Grand Palais



(b) Ritual mother-of-pearl “spoon” (or funerary boat?), polished. Decoration: three groups of small notches along the edge of the handle. Length : 11.7 cm. Width: 5.5 cm. Depth: 1.8 cm. Excavations at Vohemar, 1941. Musée du quai Branly 71.1965.4.100. © Musée du quai Branly – Jacques Chirac, Dist. RMN-Grand Palais

Illustration LIII

The Malagasy Highlands



(a) Rice terraces, Ambositra. The fifteenth century saw the development of intensive rice cultivation and the emergence of competing chiefdoms which traded with the ports of northern Madagascar. © Pierrot Men



(b) Shards from graphited bowls; incised decoration with triangular imprints made using a stalk of sedge. Ambohimananana, Antanambe Phase. © Centre d'Art et d'Archéologie, Antanananarivo



(c) Shards from a bowl, decorated with criss-cross patterns, and covered with graphite (inside and outside). Ambohimananana site, Ankatso Phase (fifteenth century). © Centre d'Art et d'Archéologie, Antanananarivo



(d) Upper part of a footed bowl (*loviamanga*, “fine-looking plate”), with an external and internal use of graphite. Fanongoavana site. © Centre d'Art et d'Archéologie, Antanananarivo



(e) Fragment of a jug showing relief decoration of ribs and cones, Lohavohitra site. Various types of relief decoration dated to the fifteenth century can also be seen in Anosy (southeastern Madagascar), in Tanzania and on the Comoros. © Centre d'Art et d'Archéologie, Antanananarivo

Illustration LIV

The Antemoro kingdom (southeastern Madagascar): a syncretic form of Islam



(a) An Antemoro religious chief (belonging to a noble Muslim group) copies magic texts from an Arabico-Malagasy manuscript, or *sorabe*, in order to create a charm. The texts are written on a banana leaf which will later be washed. The sick person who visits the healer will drink the water which has dissolved the texts, and will wash his head with this water. The ink is prepared from the bark of a tree.
© P. Beaujard

(b) An Antemoro political chief and his wife (from a Muslim noble group). The man wears a red robe (red is the color of the nobility everywhere in Madagascar); a cap with red and white stripes (white is the color of religious power), and a “three-colored” toga in wild silk, imported from the Betsileo country (Highlands). This association of three colors is a symbol of universal sovereignty. Such color symbolism was inherited from the Zafiraminia, the dominant nobility prior to the Antemoro. The chief’s wife wears a “three-colored” toga that is tied around her waist, and a red-and-white headband. Her heavy silver necklaces are inherited within the clan. They were made by melting imported silver coins.
© P. Beaujard



Illustration LV

The Portuguese in the Indian Ocean: Malacca and Madagascar



On the left: Malacca. On the right: Madagascar. Lopo Homem, Miller Atlas, 1519, fol. 2v. Along the western coast of Madagascar we find the names Cady (Sada); Dona Maria da Cunha; Santiago (St. Augustine); and Sambicete (St. Vincent). The eastern coast shows more than twenty names, among them Bamaro (Vohemar); the bay of Antonio Gonçalvez (Antongil); Mananjary; Matatane; the bay of Sainte Luce; and Turubaya (Fort-Dauphin). © Bibliothèque Nationale de France, Paris

Illustration LVI

World map by Martin Waldseemüller (1507)



This map incorporates Ptolemy's viewpoints, a map of the world by N. de Caveri (c. 1505), and a Latin translation (*Novus Mundus*) of a letter from Amerigo Vespucci. It also benefits from unknown Portuguese sources. This is the first map that uses the name America and identifies the newly discovered lands as a new continent, implying the existence of an ocean between America and Asia. Library of Congress, Washington, DC.

Wikimedia Commons

merchants, as Van Leur puts it, but was also and more importantly under the control of wealthy traders (Chaudhury and Morineau 1999: 3). This trade was driven by growth in China and in various Southeast Asian powers. In the latter region, Mojopahit lost its preeminence to the benefit of various merchant sultanates, notably Malacca, which became a hub linking the China Sea and the Indian Ocean.

16 Southeast Asia: Era of the Merchant Sultanates

The king of Java [Mojopahit] did not care about Malacca nor about its obedience, because . . . his sea ports were already in the hands of the Moors; he has the hinterland and cannot make war on Malacca because he is powerless on the sea. (Pires, ed. Cortesao 1944: 253)

The Flowering of Merchant Sultanates in Insular Asia

Mojopahit's obvious prosperity during the fourteenth century depended very much on its ability to maintain privileged relations with China and to control the straits. The founding of Malacca in 1401 was a watershed event for Mojopahit. According to D. Lombard, in 1410, China supported Java against Malacca, which claimed sovereignty over Palembang: "China appeared to endorse Java's primacy over Sriwijaya" (1990, 11: 41–42). In fact, the Ming fleet ensured the safety of the straits with the "agreement" of Mojopahit. In Southeast Asia, China first relied on Malacca, as early as 1405 (see below).

In addition, during the first part of the fifteenth century, the Chinese established direct contacts with Sumatra without going through Mojopahit, which then began to decline. The Chinese set up trusted men as rulers of Chinese or mixed-origin communities, and got rid of wayward chiefs by the use of armed force. As already mentioned, Zheng He's troops intervened against Chinese settled in the Palembang region, which had become their springboard for piracy (Mills 1970: 98–100). "Many of the people in the country [of Palembang]," writes Ma Huan, "are men from Guangdong, and from Zhangzhou and Quanzhou, who fled away and now live in this country . . . During the Hongwu period, a man from Guangdong, Chen Zuyi, set himself up as a chief. He was very wealthy and tyrannical; whenever a ship belonging to strangers passed by, he immediately robbed them of their valuables" (Mills 1970: 98, 99). According to the *Ming Shi-lu*, Zheng He's troops killed "5,000 of the enemy, burned or captured seventeen ships, and beheaded all the captives publicly in Palembang after again wresting control" (Reid 2006: 25). Chen Zuyi, who had refused to pay tribute, was captured, carried to China, and executed (Kerlouégan 2009b: 630). Zheng He placed there as ruler a Chinese person more willing to accept the authority of the Chinese emperor: the leaders at Palembang later described themselves as "clerks" of China. Relations were developed with the Muslims living along the northern Javanese coast, especially with Demak. Zheng He's expeditions led to a process of "re-sinicization" of Southeast Asia, through Chinese who were often Muslims.

As these Chinese arrived without wives, they married native women, and new mixed communities were formed. At the same time, divisions occurred between local networks, and perhaps also between the Cantonese and Fujianese (Reid 2006: 26–27). China's withdrawal from 1433 onward accelerated the process of Javanization or Malayization of these Chinese communities.

The Chinese expeditions of Zheng He helped stimulate production in Southeast Asia. Generally speaking, trade encouraged the marketing of specialized crops, increased monetization, and fostered urbanization. The ascent of the Muslim Sumatran states went along with the creation of new sultanates, not only in Sumatra, but also on other islands of insular Southeast Asia and on the Malay peninsula (Malacca). The creation of self-governing merchant principalities centered on ports – a process only just beginning in India – was in part the “consequence of the lack of distinctions between the merchant and the administrator-soldier.”¹ This movement would contribute to the expansion of Malay as the *lingua franca* – Malay written in Arabic characters. In these port-states, however, even at Malacca, the rights of the merchants would never equal those enjoyed by European traders (Reid 1993a: 248). The merchants could be robbed by the political powers, and the rulers sometimes took monopolies over certain goods. In all these ports, each merchant community had its quarter and enjoyed broad autonomy. The sultanate of Samudra-Pasai, already mentioned by Marco Polo, was probably the most active during the fourteenth and fifteenth centuries, along with Lamuri (Aceh), where a Chinese community lived at the beginning of the sixteenth century. Ma Huan points out the significance of “Sumendala” (Samudra), where the Chinese troops took action against an “usurper” and placed a ruler on the throne who suited them better (Mills 1970: 47).² Pepper cultivation extended into northeastern Sumatra, a fact signaled by the Genoese map of 1447: “The inhabitants of Taprobane, which is called Cimitiera in their language, . . . dress with linen. They are all idolaters. They have pepper, camphor and an abundance of gold.”³ Chinese demand certainly stimulated the production of pepper (Reid 1993a: 12). At the beginning of the sixteenth century, the ports of northern Sumatra exported (mainly to China) almost as much pepper as the Malabar coast.⁴ Besides gold coinage, Pasai minted tin coins that Malacca would imitate from the middle of the fifteenth century onward (at the beginning of this century, Ma Huan also notes the use of a copper currency at Lamuri, as well as Palembang and East Java, a mark of Chinese influence). Money from the Samudra-Pasai sultanate may not have been much used for foreign transactions during the fourteenth century, but that was no longer true during the century that followed: coins from Pasai dated to the end of the fourteenth or early fifteenth century have been found at Ayuthiā, and the gold currency of the sultanate

¹ Gaborieau 1995a: 456. Described by Ibn Battūta, Honavur was an Indian prototype of this kind of merchant sultanate (which was also a pirate- and warrior-state).

² “In gratitude, this king sent tribute to the court of China continuously.”

³ Amilhat-Szary 2004: 72. In 1433, Ma Huan points to Samudra-Pasai as a major producer of pepper, although Java was still exporting this spice (Mills 1970: 118).

⁴ Ma Huan provides testimony for pepper cultivation in the Sumatran interior (1970: 118). Pires lists the places of production at the beginning of the sixteenth century (ed. Cortesão 1944, I: 82, 140–144, 158–159). Cotton, too, was grown, and cotton fabrics also came from China. For trade, besides copper coins, the people of Palembang used cotton and silk fabrics (Mills 1970: 102).

provided one of the bases for trade in Southeast Asia during the fifteenth century.⁵ Besides pepper, Pasai exported camphor, benzoin, and lakawood. Porcelain vessels, textiles (silk, cotton), gold,⁶ silver, iron objects, and iron bars arrived from China. According to Pires, the city had 20,000 inhabitants; it welcomed merchants from the entire Indian Ocean, with the Bengalis being the most numerous.⁷ Merchants from Pasai were active in India: Ludovico di Varthema notes their presence at Calicut when he was there around 1514.⁸ The Kuta Kareueng site (fifteenth–sixteenth century) has yielded glass from western Asia and, more importantly, from southern Asia (Dussubieux 2010). Inscriptions in northern Sumatra attest to a Persian presence, which was by no means new in this region (Guillot 2004).

Islam progressed along the trade networks and also through war,⁹ and the various sultanates competed aggressively. At the beginning of the seventeenth century, the French general Augustin de Beaulieu mentioned expeditions by the sultanate of Aceh on the Thai–Malay peninsula to uproot pepper plants, a practice the Dutch would later use with clove trees in the Moluccas (Lombard 1988b: 121). Because Islamic traders were successful, and intensive contacts developed with Muslim countries, Islam strengthened the power of local rulers. It was often introduced by Sufis, who offered “an eclectic faith that readily accommodated pre-Muslim sensibilities” (Lieberman 2009: 814). Islam and trade contributed to unifying cosmopolitan, multiethnic societies in the context of insular Southeast Asia in its entirety. It “helped redefine and extend Malay ethnicity” (Lieberman 2009: 815), by providing script, religious principles, magic, law codes, and a calendar.

In Borneo, a prosperous sultanate developed in Brunei, which acted as an intermediary between China (where the sultan of Brunei sent embassies), the Malay world, and Java, and also between the Moluccas and China. A Chinese community was active in the sultanate at the beginning of the sixteenth century; it probably formed as early as the thirteenth and fourteenth centuries, and became mixed with local people.¹⁰ From about 1450 onward, in order to remedy the hemorrhage of his silver currency, the king of Brunei issued tin and lead coins called *pitis* (from the Javanese *picis*).¹¹ In the Sulu archipelago, on Jolo, the first Arabic inscription known to us is dated to 1410. The tomb of the first sultan of Jolo (c. 1480) exhibits a decoration of Chinese inspiration. Muslims were present in the Philippines: during the sixteenth century, the Spanish would meet Muslim merchants on Mindanao and Manila (Junker 1994). Cebu Island was another significant merchant

⁵ Wicks 1992: 235, 237. Ma Huan gives the name *zhiashi* (cf. Malay *kasha*) for the tin money of Samudra.

⁶ The gold from Pasai, however, mainly came from Minangkabau.

⁷ Pires, ed. Cortesão 1944, 1: 143. Pires also mentions the port of Pedir, visited by ships from Cambay, the Coromandel coast, Bengal, and Pegu. Although this port was preeminent until 1510, it fell into decline after the capture of Malacca, and because it was “always at war with its neighbors” (1944, 1: 139).

⁸ Varthema 1863: 151. This author is the first European to provide reliable data on insular Southeast Asia and the Moluccas.

⁹ This oft-neglected dimension has been pointed out by G. Martinez-Gros, who notes that the defeated populations “provided a large part of the fighting elites” in sultanates such as Demak, Malacca, and Aceh (2009: 648). As early as the fourteenth century, Ibn Battūta mentions the use of state violence when he visited Pasai.

¹⁰ While inscriptions in Arabic characters dated to 1432 have been found (Lombard 1990, 11: 34), other vestiges are older (see above).

¹¹ This currency thus reveals various influences affecting Brunei.

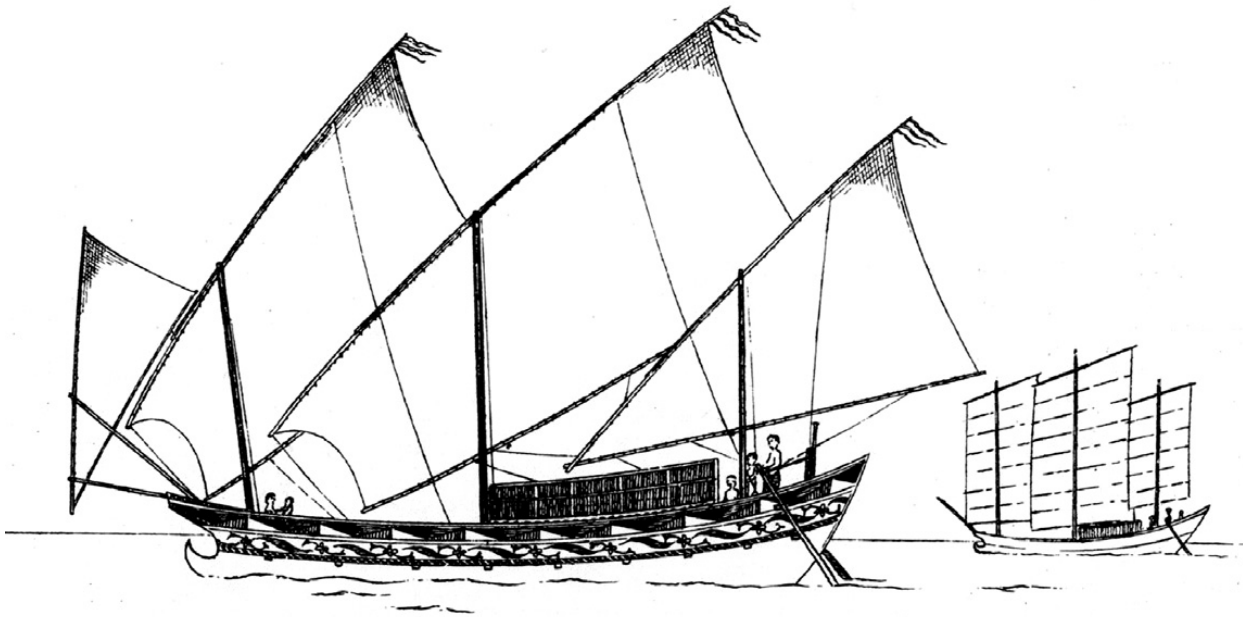


Figure 16.1 Drawing of a ship of the *jong* type, reconstituted from documents dated to the sixteenth and early seventeenth centuries (Hawkins 1982: 1). It shows a combination of canted square sails and “oceanic lateen” sails. In the background, on the right, a Chinese junk with batten square sails.

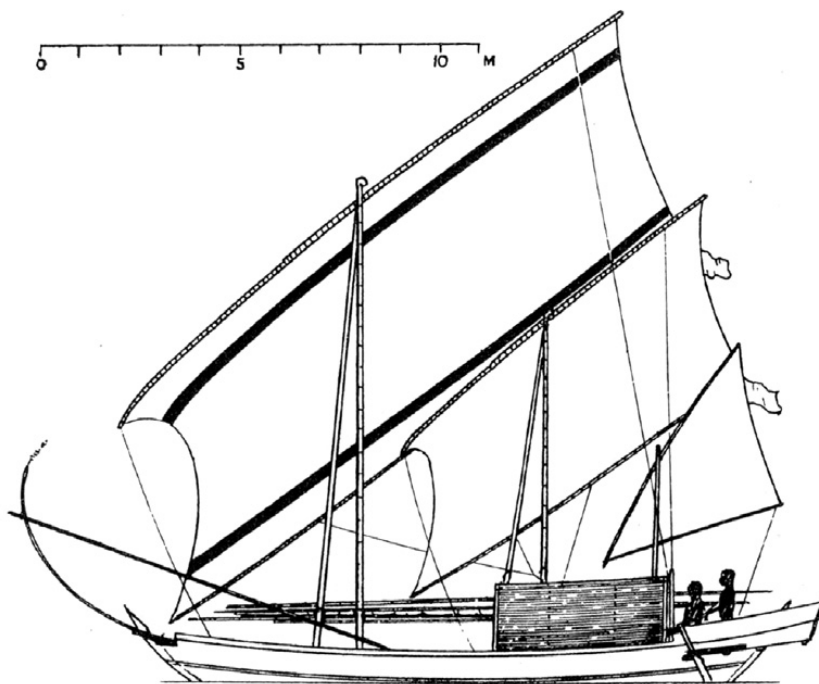


Figure 16.2 Drawing of a *patorani* (Hawkins 1982:131). Ship from southern Sulawesi built on the type of the ancient *prau* model. The *patorani* still has the tripod mast observed on the ships featured in the Borobudur temple, and shows canted square sails.

location with a Muslim population; it was the center of cotton textile manufacture, both for the local elite and for export. The Philippines had connections with China, Indonesia, Vietnam (along routes that have long been documented), and Thailand.¹²

In the Moluccas, Ternate, Tidore, and the Banda Islands introduced rules from the core into the peripheries, concerning the Muslim religion, ways of dressing, and titles. Around 1450, Islam spread among the ruling classes, reflecting the insertion of these islands into trade networks, especially those running along the northern coast of Java (Muslim traders and preachers came from Gresik). In exchange for spices, chiefs from the Moluccas in particular received Indian textiles, rice, and iron items. The chief from Ternate was the first to convert to Islam. According to Pires, 10 percent of the population on Ternate and Tidore were Muslims (Andaya 1993: 34): in fact, only the elites were converted.

The Muslim communities of southern Sulawesi took an increasing share of the trade between eastern Indonesia and the China Sea. Pires describes small communities that traded with Malacca, Java, Brunei, and all the countries between Pahang and Thailand. Bugis and Makassar merchants also sailed to the Moluccas, Banda, the islands around Java, and as far as Pegu “to sell slaves, rice and gold.” They brought back in exchange “textiles from Bengal and from Keling (the Coromandel coast), or “incense and benzoin” (Hamonic 1988: 254). G. Hamonic states that kingdoms showing an original structure developed during the fourteenth and fifteenth centuries, in which the people and the ruling prince – who was elected – were linked by a kind of social contract. Decisions were taken unanimously, and a representative of the people, the guarantor of the rights of each member of the community, could even remove the prince (Hamonic 1988). As early as the fifteenth century, these trade-oriented kingdoms affirmed everyone’s freedom to come and go. The Bugis and the Makassar, as Hamonic notes, became the champions of free enterprise. Several kingdoms refrained from levying taxes on products traded. Islam slowly penetrated the merchant communities of southern Sulawesi (the conversion of these communities, however, did not occur until the beginning of the seventeenth century).¹³ Sailors from southern Sulawesi probably launched long-distance expeditions well prior to the fifteenth century. As previously noted, the *La Galigo* epic, which goes back to the fourteenth century, recounts travels in the Indian Ocean, perhaps toward the Chagos. And linguistic research shows that the languages from southern Sulawesi played a role in forming the Malagasy language (see above).¹⁴

Expanding trade led to an increase in production and a process of urbanization, especially on the northern coast of Java. D. Lombard has pointed out the fundamental change – in fact beginning during the thirteenth century – represented by the shift in centers of gravity from the great “hydraulic” cities of the interior to coastal economic

¹² The contents of the Pandanan shipwreck, to the south of Palawan Island (c. 1450), attest to these contacts, as do sites such as Cebu (on Cebu Island) and Yap (Negros Island, Dumaguete state), already in existence during the eleventh and twelfth centuries and in full development during the fifteenth and sixteenth centuries (Bacus 2004: 268, 275). Pires points out that the Luções (people of Luzon) “never used to be in Malacca as they are now.” “They have two or three junks at the most . . . The Borneans (Brunei) go to the lands of the Luções to buy gold [that they take to Malacca]” (ed. Cortesão 1944, I: 133, 134).

¹³ The kingdoms of South Sulawesi were at their apogee during the seventeenth and eighteenth centuries.

¹⁴ The Bugis developed a particular system of writing, derived from Indian scripts, revealing an early assimilation of Indian influences.

and political centers. Not only was there a geographical change, but also a change in the way the cities were structured: the agrarian cities with their checkerboard plan, oriented according to the cardinal points, and organized from a sacred center where the royal palace was erected, were quite different from the new cities, which showed more anarchical plans, built around the port and markets with *kampung* quarters inhabited by different communities.¹⁵ While there was an organic relationship between the hydraulic city and its hinterland, with the development of wet rice cultivation, the new merchant cities were less connected to the neighboring areas. The change was also social and political: “The elite was no longer formed by a mandarin aristocracy which drew its revenues from land taxes, and power was no longer in the hands of a divinized ruler who was the axis of the world. Now the elite was essentially formed by the greatest merchants involved in long-distance trade, and power was held by a sultan who was often one of these merchants” (Lombard 1988b: 117–118). These merchant sultanates were very different from the large sultanates of western Asia, Africa (Egypt), and India, which were still partially founded on land exploitation (the Gujarati and Bengali sultanates were an exception, to a certain extent; the Mamluk state also clearly showed an interest in trade during the fourteenth and fifteenth centuries).

The development of the spice trade, which had permitted the commercial expansion of Java from the eleventh to the fourteenth century, now overtook Mojopahit. Internal unrest affected the kingdom in 1405–1406, at a time when external tensions were increasing, and again in 1437 and 1453, though some authors have reassessed its importance. In 1468, a major princely rebellion occurred (Lieberman 2009: 795). Some time between 1486 and 1512, “the *kraton* shifted to Kediri, possibly under a new dynasty” (Lieberman 2009: 795). Mojopahit lost control over western Java in the 1420s, and the ports of the northern coast slowly rejected the tutelage of Mojopahit’s rulers.¹⁶ This northern coast showed multiple signs of hybridization during the fifteenth century, in various fields (weights and measures, navigation, and architecture) (Reid 2006: 28). Expanding Islam offered the merchant elites a new legitimacy, finally becoming a symbol of autonomy for the cities of the northern coast. It went along with a rejection of the old elites of Mojopahit, the result of increasing dislocation between a relatively decentralized agrarian state and growing commercial enclaves that were becoming more and more prosperous.¹⁷ While rice was the main merchandise exported by these coastal cities, Pires also notes “the countless cloths [locally produced] that the Javanese carry to Malacca” (ed. Cortesão 1944, 1: 180). The Javanese also sold spices, as well as gold and slaves.¹⁸ Chinese texts, as well as later Javanese chronicles, attest to “the cosmopolitan atmosphere of the ports of the Pasisir (northern Javanese

¹⁵ Generally speaking, everywhere “the cosmopolitanism of the city-states imposed a dynamic of fragmentation on urban space” (Boucheron and Loiseau 2009: 680).

¹⁶ According to Ma Huan, “the king of the country [Mojopahit] constantly sends chiefs, who load foreign products into a ship, and present them as tribute to the Central Country” (Mills 1970: 97); however, one wonders whether these ships were sent by the ruler of Mojopahit or by merchant cities.

¹⁷ Hall 1992: 226–227, 229 n. 46. Hall also notes the importance of local cults and of “individual relationships with divine intercessionaries”: “the king [of Mojopahit] was no longer the mediator between the human and the Divine” (2001a: 21).

¹⁸ Pires indicates that the lord of “Grisee” (Gresik) controlled trade with the Moluccas and Banda when he had junks [prior to the Portuguese intervention]. Gresik had “many cloths of all kinds. They are sold to

coast) and the emergence of a new society whose development would lead to the temporary eclipse of the agrarian kingdom of the interior, in the century that followed” (Lombard 1990, 11: 44). Mojopahit would finally disappear in 1527, destroyed by the sultan of Demak.¹⁹ Along the entire Pasisir coast, merchant cities flourished during the fifteenth century, and Muslims of various origins flocked to them. Pires observes the process slightly later:

At the time when there were heathens along the seacoast of Java, many merchants used to come: Parsees, Arabs, Gujaratees, Bengalees, Malays and other nationalities, there being many Moors among them. They began to trade in the country and to grow rich. They succeeded in ways of making mosques, and mollahs came from outside, so that they came in such growing numbers that the sons of these said Moors were already Javanese and rich, for they had been in these parts for about seventy years. In some places, the heathen Javanese lords themselves turned Mohammedan, and these mollahs and the merchant Moors took possession of these places. Others had a way of fortifying the places where they lived, and they took people of their own who sailed in their junks, and they killed the Javanese lords and made themselves lords; and in this way they made themselves masters of the seacoast and took over trade and power in Java. (ed. Cortesão 1944: 182)²⁰

Pires’s testimony thus highlights the diversity of origins in the Islamic world (it would be wrong to think in terms of “ethnicity”) and the phenomenon of acculturation of the descendants of the “merchant Moors”:

These lords *pates* are not Javanese of long standing in the country, but they are descended from Chinese, from Parsees and Kling, and from the nations we have already mentioned. However, brought up among the bragging Javanese, and still more on account of the riches they have inherited from their antecessors, these men made themselves more important in Javanese nobility and state than those of the hinterland. (ed. Cortesão 1944: 182)

Barros also mentions “Moors’ who came for reasons of commerce and began to settle and populate the maritime region, multiplying so quickly that in less than 150 years they had become lords and began to call themselves kings” (Reid 2006: 9). These “Moors” were primarily Chinese of mixed origin: Barros mentions the Chinese origin of the *jarwi*, Muslims from Sumatra, and writes: “among them are certainly found the Lords of this great island” (Reid 2006: 9).

The social mobility of the inhabitants of the trading ports and the emergence of the individual echoed their geographical mobility. Several times, Pires points out the

most of Java and to many other islands” (ed. Cortesão 1944, 1: 194). Slaves arrived in Java from islands east of Bali, such as Sangeang and Sumbawa (ed. Cortesão 1944, 1: 202–203).

¹⁹ Pires notes: “Guste Pate [a “governor” of Mojopahit] is always at war with the Moors on the seacoast, especially with the lord of Demak” (ed. Cortesão 1944, 1: 176). The ruler of Demak recruited slaves from Bali and Sulawesi into his army (Wink 1990: 16).

²⁰ Pires describes the decline of Mojopahit: “The island of Java used to rule as far as the Moluccas on the eastern side and [over] a great part of the west; and it had almost all the island of Sumatra under its dominion, and all the islands known to the Javanese, . . . until about a hundred years ago, when its power began to diminish until it came to its present state . . . [Java] navigated to Aden, and its chief trade was in Bonuaquelim [Coromandel], Bengal and Pase. [Java] had the whole of the trade at that time . . . They flourished so greatly that Muhammad and his followers determined to introduce their doctrines in the seacoasts of Java [together] with merchandise” (ed. Cortesão 1944, 1: 174).

humble origin of lords he has met in the ports of the Javanese Pasisir during his journey (1512); for example, “the grandfather of the lord of Demak was probably a slave, although other people said that he was a merchant” (Lombard 1988b: 119).²¹

According to European travelers, the merchant aristocracy of the *orang kaya* notables (“the people at the top”) retained most of the power; at times, however, the ruler or sultan had a near-monopoly on trade.²² This view probably does not reflect reality in the merchant cities of Southeast Asia during the fifteenth century. “Recent studies point to the conclusion that direct control of trade by state functionaries was a reaction to the European presence in Southeast Asia, not a condition that the Europeans found on their arrival” (Tracy 1991: 18).²³ While local factions were often preeminent, foreigners sometimes dominated economic and political life. During part of the fifteenth century, the Gujaratis sailed to Java via the Strait of Sunda (thus bypassing the Strait of Malacca) and steered their vessels to Gresik; it was the Chinese, however, who first appear to have played a crucial role along the Pasisir coast, and – more generally – in the process of urbanization that can be observed throughout Southeast Asia during the fourteenth and fifteenth centuries (Pires, ed. Cortesão 1944, 1: 45; Lombard 1990, 11: 44). Ma Huan’s testimony here is explicit: the main trading centers such as Tuban, Surabaya, and Gresik were home to Chinese colonies. Founded by Chinese in the fourteenth century, Gresik was ruled by a man from Guangdong. “Foreigners from every place come here in great numbers to trade, . . . [and] the people are very wealthy” (Mills 1970: 90). Tuban was home to more than one thousand families, and had “two headmen to rule them; many of them are people from Guangdong” and Zhangzhou, “they came to this place and established themselves” (Mills 1970: 90; Reid 2006: 27). To the west, Banten was part of a small state that was very active in trade with China, the Gulf of Thailand and India;²⁴ according to Pires, the “kingdom of Sunda” (Pajajaran) had six junks that mainly exported rice, as well as gold, pepper, and slaves, which the Sundanese and other traders went to fetch from the Maldives; these slaves were probably of African and Malagasy origin.²⁵ Pajajaran also controlled the port of Kalapa, further north. European travelers point out the significance of the Chinese

²¹ Pires, however, indicates that the king of Demak, Raden Patah, was the son of a prince from Palembang – himself the illegitimate son of a king of Mojopahit – who married a Chinese princess from Champa (ed. Cortesão 1944, 1: 185). One sees here the formation of an origin myth.

²² This was mentioned by the French chronicler Augustin de Beaulieu at the beginning of the seventeenth century at Aceh. Quoted by Lombard 1988b: 120–121.

²³ Ternate, as Pires notes, exerted its authority over the [spice] islands thanks to its warships (korakoras), but in fact, “the people from Banda had their own trading ships and sailed to Malacca.” The notion of trade controlled by the state, in Southeast Asia, is “improbable” (Tracy 1991: 15, 16). K. Hall (2011) has adopted a different position, to the effect that merchant states at this time needed – more than the older political formations – to control the regions of production. See also Meilink-Roelofs 1962.

²⁴ It may be that Banten had already emerged during the fourteenth century, if the name “Bindan” – given in the *Yuanshi* to a state that sent a tributary mission to China in 1322 – is indeed Banten. See Dupouzat 1992: 57. The site of Banten has yielded many Chinese ceramics, dated between the ninth and sixteenth centuries, as well as Thai and Vietnamese ware from the fifteenth and sixteenth centuries. Banten freed itself from the control of the Pajajaran kingdom during the sixteenth century and formed an important sultanate.

²⁵ Pires, ed. Cortesão 1944, 1: 168–169. “[Ships] sail from Sunda to the Maldives in six or seven days.” Besides Banten, Pires signals “the magnificent port” of Kalapa (Batavia) (1944, 1: 172–173).

quarter at Banten during the sixteenth century, and the activity of its merchants, “who have acquired the same reputation as the Jews in Europe.”²⁶ These Chinese merchants “go about the country, scales in hand, buying up all the pepper they find . . . They amass such a great quantity that they can fill the ships from China when they arrive, selling fifty thousand caixas’ worth, which has cost them no more than twelve thousand” (Braudel 2002, 11: 130). “Sunda,” writes Pires, “uses Chinese money as cash.” Around 1475, one man originally from China contributed to the rise of Demak, which undertook two punitive expeditions against Palembang. When Pires arrived in this region, at the beginning of the sixteenth century, Demak had more than forty junks and had extended its authority over Jambi, Palembang, Bangka, and Belitung (Lombard 1990, 11: 43). The city had “between 8 and 10,000 houses.” Around 1524, the ruler of Demak took the title of sultan, and in 1527, the armies of Demak seized Mojopahit. That same year, a Muslim dynasty was established at Banten.

Several shipbuilding sites were described by the Portuguese at the beginning of the sixteenth century, at Rembang and Cirebon for example. A large vessel of the *jong* type built in Java in 1513 weighed 1,000 tons and could carry a thousand men (Manguin 1985a). Ships were also built along the southern coast of Kalimantan. Of the many Javanese embassies sent to China (“an average of one per year during the first thirty years of the fifteenth century”), a third of the envoys bore Chinese names, as well as Javanese titles (Reid 2006: 28). These Chinese moved from state to state: “Arya Chen Yen-Xiang is first recorded in Korean records as an envoy of the Siamese king in 1394. He reappeared in 1406 as an envoy from Java to Korea, . . . he eventually also became the first envoy of Java to Japan, arriving in Hakata in 1412” (Reid 2006: 28).

The Sultanate of Malacca

Another maritime power emerged from the beginning of the fifteenth century: Malacca, whose ascent was crucial to the decline of Mojopahit. With Malacca’s growth, it was no longer necessary to go to Java to acquire spices. Since the city had practically no hinterland (it obtained its rice from Thailand, from Pegu via the port of Martaban,²⁷ and from Java), its importance is best explained by its role as entrepôt and intermediary.²⁸ In addition, it controlled areas of tin production; Ma Huan notes the use of blocks of standard weight in trade. Malacca also developed crafts and industry: it built ships, and manufactured firearms.

Like Srīwijaya before it, Malacca built its dominance on alliances.²⁹ The city was in contact with the Muslim ports of northern Sumatra, and it also established relations with the trading ports of Java’s northern coast. More importantly,

²⁶ From a traveler, in 1595.

²⁷ “The trade in rice,” notes G. Bouchon (1999: 45), “generated secondary circuits. Thus, ships from Malacca brought copper bars in Pasei, and exchanged them for pepper, which was later bartered in Martaban for rice destined for Malacca.” Cf. Pires, ed. Cortesão 1944, 1: 98–99.

²⁸ In fact, we should use the term *umland* for Malacca (Manguin 2000d).

²⁹ “The *kadātuan Srīvijaya*,” writes P.-Y. Manguin (2000d: 167), “is truly the prototype of the *negeri Melaka*.”

Malacca chose to rely on Chinese power. According to the *Mingshi*, in 1405, Emperor Yongle recognized the ruler of Malacca, who had sent an embassy to China, as having the status of a king. In the same year, the first expedition of Admiral Zheng He stopped at Malacca, where he built a warehouse and dockyards for the Chinese ships. In 1410, Zheng He reaffirmed the royal status of Malacca's ruler.³⁰ Embassies from this city would now arrive every year or two years in China, sometimes accompanied by their king. The preeminence of the Muslim networks explains the conversion of Malacca's ruler to Islam, perhaps in 1414, although Subrahmanyam and Markovits (2009: 315) only see "Islam strongly established as the state religion during the years 1440–1450." When China turned its focus inward after 1433, the Muslim merchants – including Tamils (the progress of Islam in Southeast Asia coincided with a spread of this religion along India's southeastern coast) – took advantage of the space left by the Chinese. The Malay chronicles, however, show a dual Hindu and Islamic legacy. The *Hikayat Hang Tuah*, for example, traces the royal lineage of Malacca back to Sang Perta Dewa, a semi-divine king from Indra's paradise. The *Sejarah Melayu* relates this lineage to Iskandar Zulkarnain: Alexander the Great. This Indo-Muslim synthesis is noticeable in the sovereignty myths of the Highlands of Madagascar (see below). During the second half of the fifteenth century, Malacca was strong enough to reject the suzerainty that the kingdom of Ayuthiā was trying to impose.

A good example of a merchant state, Malacca became the trade hub between the Indian Ocean and the China Sea. The price of goods was mostly determined by supply and demand. Pires describes the valuation of some cargoes by a group of ten or twenty merchants who "gathered together with the owner of the merchandise and bid for it" (ed. Cortesão 1944, II: 273). A similar procedure was used for the payment of customs fees: "with the sultan's agreement, a board of ten merchants estimated the value of the cargo in the presence of the police chief, who immediately collected the taxes."³¹ The state of Malacca, which equipped its own vessels, acted as a true mercantilist kingdom. The whole ruling class and the sultan himself engaged in trade (Thomaz 1993: 71, 74). The revenues the state derived from commercial taxes represented more than ten times the amount of the tributes and

³⁰ According to Ma Huan, during the seventh year of Yongle's reign, the emperor requested Zheng He to grant the status of "country" to the territory of Malacca, which until that time had paid a yearly tribute of 40 gold *liang* to Thailand, and elevate its chief to the rank of "king" (Mills 1970: 46, 108ff.). The ruler of Malacca received two silver seals, a hat, a belt, and a robe, and Zheng He erected an inscribed stela. Along with his family, the king then visited the Chinese court, which gave him a ship for his journey back home. "The first three Melaka rulers all travelled to China to be enthroned" (Reid 2006: 10). Mills, however, notes that Malacca only rejected its vassalage to Thailand in 1488. Pires (ed. Cortesão 1944, II: 257) mentions a naval battle won by Malacca against a Thai fleet (at a date not determined).

³¹ Thomaz 1988: 32; Pires, ed. Cortesão 1944, II: 273–274. Customs duties amounted to 6 percent on all the merchandise from India and western Asia (for some goods, 2 percent of taxes were added, upon import and upon export). For ships coming from the east or from the China Sea, the system was different: they were "freed of customs duties, but the merchants were forced to sell 25% of their products to the state at a price 20% lower than the market price. In exchange, they received other goods, valued according to the market price, to which 20% was added" (Thomaz 1988: 33). Food was free of tax (it was the same at Pasai) (Pires, ed. Cortesão 1944, I: 98). However, the king and the dignitaries received gifts.

taxes paid by the local governors or the vassal kings.³² These revenues complemented the resources the sultan derived from his own merchant activity. In particular, they allowed the state to pay the mercenaries who ensured the defence of the city and its ships.³³ The low level of customs duties in Malacca contrasted with the usual rate applied in the territorial states of southern Asia: “The customs duties reached 22.2% in Siam and 37.5% in Bengal.”³⁴ However, in Calicut, the rate was about the same as in Malacca.

The city had between 100,000 and 200,000 inhabitants by the early sixteenth century. Pires points out the cosmopolitanism of Malacca: in one day, it was possible to meet people speaking “eighty-four different languages.” The sultans encouraged traders to settle at Malacca: a merchant from the Indian Ocean who came to live there paid only 3 percent customs duties on his merchandise, instead of 6 percent. This cosmopolitanism went hand in hand with religious tolerance.³⁵ The city had four “harbor chiefs” *syahbandar*, who belonged to the four main foreign communities (Gujaratis, Tamouls, Javanese, and Chinese). The *syahbandar* received the merchants from the region they represented, introduced them to the First Minister (*bendahara*), found warehouses for their merchandise, and were bound to protect them. These harbor chiefs played a significant role in the life of the city, and the Portuguese compared them to the consuls of European merchant cities: indeed, Malacca was the only place in the Indian Ocean where, as “in the Mediterranean countries and the Netherlands, the merchant communities acquired a right of representation with the system of consuls for each nation” (Boucheron and Loiseau 2009: 680). The Gujaratis, who according to Pires had more than a thousand merchants, formed the most powerful community, specializing in exchanges with western Asia and Egypt.³⁶ Their *syahbandar* was in charge of all the merchants from the western Indian Ocean. They exported raw silk, tin, spices, aromatics and precious woods, and imported opium,³⁷ rose water, dyes, tapestries, and “thirty kinds” of cotton and wool textiles. “Total textile imports from India were estimated to be about 460,000 cruzados,

³² The towns of the Thai–Malay peninsula paid a yearly tribute, especially in tin; kings from the Sumatran coast also paid tribute (usually in gold) (Pires, ed. Cortesão 1944, II: 260–263).

³³ Thomaz (1993: 83) notes that this point distinguished Malacca from Indian ports such as Calicut and Cannanore, where the merchants needed to defend themselves and owned and managed war fleets. “In Malacca, the links between economy and politics were closer.”

³⁴ In Pegu, however, which was a trade-oriented state, the customs duties were 12 percent. Thomaz 1993: 87, quoting Pires, ed. Cortesão 1944, I: 93, 99, 104.

³⁵ In his *Al-Ma’al’aqiya* (1462), Ibn Mājid criticized intermarriage between Muslims and heathens as practiced in Malacca. See Tibbetts 1979: 206; Thomaz 1993: 78. Sultan Maḥmūd, however, introduced stricter Islamic rules at the beginning of the sixteenth century and even attempted to turn Malacca into a center of pilgrimage for Muslims.

³⁶ A thousand Gujaratis resided in Malacca, and between 1000 and 2000 crossed the Bay of Bengal during the navigation season (Sandhu and Wheatley 1983, I: 181). Ships from Gujarat left Cambay in March and sailed directly to Malacca, carrying merchants from Egypt, Arabia, and western Asia. Merchants from the Malabar coast gathered on the Coromandel coast, at Pulicat, whence three or four vessels sailed to Malacca in October each year. The journey lasted one month. Traders from Chaul, Dabhol, and Goa went first to Bengal, and then on to Malacca (Pires, ed. A. Cortesão 1944, II: 271).

³⁷ Opium came from Aden and Cambay. Part of this opium was reexported, to Thailand and Bengal especially (Pires, ed. Cortesão 1944, I: 93, 108, II: 269–270).

equivalent to 18 tons of silver, in 1511” (Palat 2015: 166–167). It is certain, as Reid notes (2009: 33), that the spread of Islam increased the demand for Indian cotton textiles in Southeast Asia. The “Keling” from the Coromandel coast, who were mainly Hindus³⁸ and belonged to the Vijayanāgara Empire, had the same number of merchants as the Gujaratis. Their *syahbandar* had jurisdiction over the ships from all the coastal countries along the Gulf of Bengal. They brought Indian cotton fabrics and rice, in particular. The trade with India and the Muslim western world also involved cannons and smaller firearms. The Malay word *bedil*, referring to “a firearm” in general, is of Dravidian origin (cf. the Tamil *wedil*). “Among the pieces seized by Albuquerque in 1511, the most significant was a gift made by the ruler of Calicut to the Sultan of Malacca.”³⁹ “For the assessment of the cargo of a ship by the customs, half of the board appointed for that purpose – five merchants out of ten – were chosen among [the Keling].”⁴⁰ In 1511, the richest merchant in Malacca, Naina Suryadeva, was a Tamil. He had shared a trade monopoly on nutmeg from Banda and cloves from the Moluccas with a man from Gresik, on the northern coast of Java. At the time the Portuguese arrived, Naina Suryadeva used to send eight junks to the Moluccas each year, while the Javanese trader sent only four. Another Tamil merchant, Naina Catu, became the main collaborator with the Portuguese after 1511 (Thomaz 1988: 44).⁴¹ Around 1513, two of his junks were in Thailand, another was in Bengal, and a smaller vessel was at Palembang. In addition, in association with De Araujo, the first Portuguese factor at Malacca, “he equipped a junk to sail to Banda and Ternate, a junk that went to Pegu – half of the cost being paid by the Portuguese Crown –, another sailed to China and a fourth one to the ports of the Coromandel coast” (Thomaz 1988: 37). The great Tamil merchants sometimes lent money to the Portuguese authorities when they were in dire need.

The Javanese, who specialized in the trade in food, formed the larger community. Their *syahbandar* had control over all the merchants from insular Southeast Asia. Among those merchants were Muslim traders from Luzon, a smaller community which traded in the China Sea. In 1513, a great merchant belonging to this community, Aregimuti Raja, sent junks to Thailand, Kalimantan, Sunda, and China, and a smaller vessel to Pasai. Another trader from Luzon equipped one of the junks that accompanied the fleet of Fernão Peres de Andrade to Canton in 1517. The traders from Luzon had their origins in the mixed Chinese Muslim communities who had settled in Manila, Brunei, and other ports, and were cut off from Fujian during the second half of the fifteenth century (Reid 2006: 10). Various Muslim communities were thus formed from Malacca (Thomaz 1988: 38). Merchants from South Sulawesi, also Muslim, settled in Malacca and certainly played a role in Islam’s penetration of the Bugis and Makassar countries. In addition, after Malacca’s fall, merchants from

³⁸ Pires, ed. Cortesão 1944, II: 272. The Muslims of the Coromandel coast were given the name *chulias*. “The term Keling seems to have embraced the Maraikkayars [Muslims] of Tamil origin” (Subrahmanyam 2005b: 60).

³⁹ Lombard 1990, II: 179. In addition, Chinese arms were imported into the archipelago. The Sino-Mongol troops sent to Java in 1293 may have used firearms (Lombard 1990, II: 178).

⁴⁰ Thomaz 1988: 36–37. Pires writes that great Keling merchants “have the bulk [of the trade] in their hands” (ed. Cortesão 1944, II: 255). Barbosa also points out the wealth of the Hindu merchants of Malacca.

⁴¹ He became *bendahara*, and had authority over non-Muslims. The trader from Luzon called Aregimuti Raja was preeminent in the Muslim community.

Johore, Champa, and the Minangkabau country, who were often Muslims, came to Sulawesi to live (Hamonic 1988: 255–256).

The Chinese, who came primarily from Fujian, formed another significant community; they too had their *syahbandar*, who supervised the vessels coming from the ports of China, Kauchi (Tonkin), Champa, and the Ryūkyū Islands, which served as a hub with Japan.⁴²

Beside these large communities, the Portuguese also mention a significant number of Bengalis, often rather poor, and people from Pegu, who were often employed as pilots. In addition, Pegu “used to supply them all with junks – Pedir, Pase, Pahang,⁴³ and Java, and Palembang” (Pires, ed. Cortesão 1944, 1: 195). These junks were brought to Malacca to be sold.⁴⁴ In addition, the Portuguese texts refer to “Armenians,” who may have been either Armenians or Nestorian Christians from western Asia.⁴⁵ Texts also mention “white Jews” from the Ottoman Empire and “black Jews” who originated in the Malabar region, where they had either settled at early times, or descended from African slaves who had come with the “white Jews.”

There were no guilds or trading companies, but merchants sometimes formed associations for specific ventures. Rich merchants stayed in the ports, at the center of their business networks, while smaller traders rented “compartments” for their merchandise on big junks, a system already described by Ibn Battūta for the Indian Ocean trade. According to Pires, while the cost of transport in Java amounted to 20 percent of the value of the goods, profits on sales reached 40 percent in northern Java, 50 percent in Sunda, and 100 percent or even 300 percent in Pulicat (Vijayanagara), Bengal, and China.⁴⁶ The practice of *commenda* partnership was common: “one lent some money to a shipowner who reimbursed it when the ship returned; a percentage fixed in advance was added, which depended on the port of destination.”⁴⁷ The profits were reinvested in trade, or used for the acquisition of land or slaves (the merchants owned more than half of the slaves at the time of the Portuguese conquest).⁴⁸ Women played a significant role in Southeast Asian trade. During the sixteenth century, Malay proverbs “spoke of

⁴² Thomaz 1988: 38. The Portuguese texts, as Thomaz points out, make a distinction between “Chins” and “Chancheus” (Quanzhou?), which probably reflects a geographical (Cantonese and Hokkien-speaking people), and perhaps also a religious distinction.

⁴³ Pahang was the center of a smaller merchant sultanate. ⁴⁴ Java also built a few junks.

⁴⁵ In 1517, one of these “Armenians,” Khoja Iskandar, departing from Malacca, “led the first Portuguese eager to see the tomb of the apostle Saint Thomas to Meliapur” (Thomaz 1988: 39).

⁴⁶ Pires, ed. Cortesão 1944, 11: 284. When the king put his goods in a junk, he received 30 percent more in return than the other merchants. “The king made the man who dealt with his money exempt from dues . . . The kings of Pahang, Kampar and Indragiri, through their factors,” also engaged in trade (Pires, ed. Cortesão 1944, 11: 284–285). As previously noted, what Pires calls a junk corresponds to the Malay *jong*. These ships were often bigger than the largest Portuguese ships: “their tonnage was considerable . . . an average burthen of 350 to 500 tons deadweight; the largest occasionally reached 1,000 tons and carried a thousand men aboard” (Manguin 1993: 266).

⁴⁷ Thomaz 1988: 40. “The percentages provided varied from 35 to 50% in the case of travel in Southeast Asia, 80 or 90% in the case of travel to India, and even 200% for a successful trip to China” (Thomaz 1988: 40). “The investor did not intervene in the management of funds and assumed the loss after a shipwreck . . . The sultan used this procedure to finance as much as one third of his operations. His co-investors were exempted from customs duty” (Thomaz 1993: 82–83).

⁴⁸ Slaves, however, represented only 7 percent of Malacca’s population (Thomaz 1993: 83).

the importance of teaching daughters how to calculate and make a profit” (Pomeranz and Topik 1999: 28–29).

Finally, Malacca appears to be the city-state that most closely matches what we have observed in Europe, with a symbiosis having evolved between traders and political elites. It was the only city-state in Southeast Asia to have developed that synergy to the same extent, despite its position at the center of a network of city-states and merchant sultanates. However, Malacca did not exhibit the complexity of financial instruments characteristic of Europe, nor was it able to exercise a significant influence on the development of large country-states. In addition, its economic expansion did not rely on aggressive imperialism of the Iberian type.

Continental Southeast Asia: Expansion of Ayuthiā and Dai Viet

Within the context of the overall growth of trade between the Indian Ocean and the China Sea, partly led by the Ming during the early fifteenth century, the Gulf of Thailand played an active part, and this worked to the advantage of Ayuthiā. This kingdom experienced remarkable internal growth from the time of its formation during the fourteenth century. Advances in irrigation techniques, together with the development of new floating rice varieties used in the lowlands of the Chao Phraya basin, led to spectacular agricultural progress that in turn supported population growth.⁴⁹ Combined with expanding trade, this growth encouraged the political consolidation of the state (Reid 1993a: 205). Like Dai Viet during the same period and partly for the same reasons, Ayuthiā was a more centralized state than the pre-existing political entities in this region.⁵⁰ It pursued a process of state militarization, especially under Trailok (1448–1488), who separated civil from military functions and created a strict hierarchy within the nobility (Lieberman 1997; Reid 1999). Ma Huan points out that the king “regularly despatches his commanders to subject neighboring countries” (Mills 1970: 107).⁵¹ Perhaps because of the new maritime orientation of Cambodia, a long rivalry pitted Ayuthiā against the Khmer state, the latter being in a position of inferiority to its neighbor.⁵² In 1431, Angkor was taken and looted. According to Vickery, however, apart from this episode, the Chinese chronicles do “not directly support the stories of Thai invasions of Cambodia” (2004: 16). During the second half of the fifteenth century, Thailand controlled part of the Thai–Malay peninsula, which provided tin. Like Dai

⁴⁹ “Agricultural refinements and associated population increases may have reduced epidemic susceptibility” (smallpox, for example, becomes endemic – with limited virulence – within a population of 100,000 to 200,000) (Lieberman 2003: 251).

⁵⁰ The state expanded tax levies on land and exports, and also corvées and military enlistment.

⁵¹ Ayuthiā’s relations with the north were at times conflictual; the *Ming Shi-lu* thus mentions an attack by Ayuthiā against Chiang Mai in 1442 (see Vickery 2004: 25ff.). The state of Lang Na (which had Chiang Mai as its capital) was expanding from the mid-fifteenth century onward. Here again, Lang Na’s growth partially resulted from climatic improvements. However, Ayuthiā would take the upper hand at the beginning of the sixteenth century.

⁵² Vickery 2004: 48. V. Lieberman (2003: 458–459) has correctly analyzed this situation of increasing inferiority as being due to Thai agronomic technical efficiency (which ensured their demographic and political superiority), the unfavorable geography of the Mekong valley, and the weakness of the Khmer “social space.”

Viet, Ayuthiā thus expanded its territory, centralized its administration and became more militarized; later it would also see its “population adopt more uniform religious and ethnic identities” (Lieberman 2009: 31). As in Burma, Theravāda Buddhism helped create Thai ethnicity (Lieberman 2009: 815).

Ayuthiā was also able to develop exports of manufactured products. Ceramics came in particular from the site of Sawankhalok (Sangkhalok ceramics, which sometimes imitate Chinese ceramics). Thai celadon was exported from 1425 onward. The significance of Thai pottery exports can be seen from the shipwreck of Pandanan (south of Palawan, c. 1450) (Dupoizat 2008: 329–330), although that shipwreck contains a preponderance of Vietnamese ceramics (see below). A textile industry profited from the rise of cotton cultivation along the tributaries of the Chao Phraya. The country’s expanding trade was accompanied by a process of monetization. Taxes and fines were increasingly paid in silver. The Thai at first used cowries and unminted silver for their transactions; they introduced minting later, by the middle of the fifteenth century, and instituted standardized weights (Ma Huan indicates the use of cowries as money “for current use; optionally, gold, silver, and copper coins may all be used; but the copper coins of the successive dynasties in the Central Country are not in use”).⁵³ Aside from commercial transactions, money was also used to pay mercenaries.

The administration of foreign trade was entrusted to “officials of foreign origin, Persian and Indian Muslims, in addition to Chinese and Sino-Siamese with mercantile backgrounds and experience” (Findlay and O’Rourke 2007: 137). The most significant trade was with China, and ships from the fleet of Zheng He visited the kingdom. In addition, a sizeable Chinese colony lived in Thailand.⁵⁴ Ma Huan mentions the presence of 500 or 600 foreign families at “Shanshui” (Lopburi?); from this market town, a route ran to Yunnan. Chinese merchants paid lower taxes than the other merchants. Chinese mercenaries may have introduced the use of guns and cannons, which the Thai industry came to manufacture. Chinese living in the Gulf also acted as intermediaries between Ayuthiā and China (Vickery 2004: 39). The Thai kingdom dispatched as many as sixty missions to China between 1369 and 1429, “more than any other Southeast Asian state” (Findlay and O’Rourke 2007: 137). At the beginning of the sixteenth century, the Thai still sent six or seven junks a year to China. The *Ming Shi-lu* echoes these relations and the strong Thai influence on the language and script at the court of Ayuthiā: “in 1487, following difficulties in reading a document in *fan* script from Ayutthaya, the Chinese authorities said that henceforth they would only accept documents in Arabic (*hui*) script” (Wade 2000; Vickery 2004: 42).

Pires notes the extent of traffic with insular Southeast Asia at the beginning of the sixteenth century: Ayuthiā sent thirty junks a year to Malacca carrying rice, salt, vegetables, fish, alcohol, lac, brazilwood, cheap textiles, ceramics, and various metals. Its ships brought back “slaves, which they take in quantities, wide and narrow muslins, and Kling cloths in the fashion of Siam, camlets, brocades from Cambay, white cowries, camphor, pepper, quicksilver, opium, cloves, mace and nutmeg”: this list

⁵³ Means of exchange involving silver also appeared in the inland states of Sukhothai and Lan-na. The metal probably came from Yunnan, but it was also obtained through coastal trade (Lieberman 2003: 251–252).

⁵⁴ Wicks 1992: 180; Frank 1998: 103; Pires, ed. Cortesão 1944, 1: 103, 108–109. While the Ming only authorized the sending of three ships by Ayuthiā every three years, the Thai overstepped these limits.

highlights the role of Malacca as entrepôt, reexporting products from all countries. Thailand also traded with India, especially Bengal, Coromandel, and Gujarat: “the Gujaratis come to its port[s] every year” (Pires, ed. Cortesão 1944, 1: 109).⁵⁵ Imported ceramics found at the Kottapatnam site, in Andhra Pradesh, came primarily from Thailand during the fifteenth century (Sasaki 2002).

Cambodia, too, managed to maintain an active presence in international trade. Better located for trade with China and insular Southeast Asia, Phnom Penh became the capital of the country (Vickery 2004: 43). There are “thirty-five records of contact between the Ming court and Cambodia between 1370 and 1499” (Wade 2000; Vickery 2004: 16). “Between the 1370s and 1419 more missions were exchanged with China than during the entire Angkor period” (Vickery 2004: 48).

In northern Vietnam, the Chinese influence was not only commercial, since the Ming incorporated this region into their empire from 1407 onward, probably in order to control the emporia of the Red River region. A Viet reaction occurred by 1424, and following a series of defeats, the Ming abandoned the country. A war chief from the southern part of the delta took control of Dai Viet and founded the Le dynasty. Dai Viet, however, paid gold tributes to China (gold also reached Canton via private trade).⁵⁶ Dai Viet then became integrated into an expanding international trade system.

On the coast further south, also, the Venetian Niccolò dei Conti, who visited Champa in 1435 from Java, reports that the country exported aloeswood, camphor, and gold (which came from distant countries, since Champa did not produce gold). Muslims from Champa seem to have contributed to the rise of Islam in Java during the fifteenth century.⁵⁷ While trade progressed both within Champa and with foreign regions, the country experienced monetary difficulties in the middle of the fifteenth century, at the same time as China (Atwell 2002).

A transformation of the Dai Viet state occurred under Le Thanh-tong’s reign (1460–1497), which was marked by the influence of a Confucian literate class: a “Neo-Confucianist agenda” underlay Vietnamese statebuilding; as in Ayuthiā, it led to increased capacities at the military level. An administration was set up, selected at all levels through the Chinese method of examinations.⁵⁸ Regular population censuses

⁵⁵ Following a conflict with Malacca (mentioned in 1431 by the *Ming Shi-lu*), Ayuthiā, however, stopped sending ships to this port, for a short period of time. Just after this conflict, Ayuthiā sent a series of commercial embassies to China (1433, 1434, and 1438) (Vickery 2004: 25).

⁵⁶ In 1433, China insisted on the payment of the yearly gold tribute (Whitmore 1983: 377). At the beginning of the sixteenth century, Pires still notes the continued significance in Malacca of silver and gold imported from Vietnam.

⁵⁷ Especially at Gresik and Surabaya (Lombard 1990, 11: 42). According to a Javanese tradition, a “princess from Champa” (Putri Campa) came to marry a prince from Mojopahit. Ma Huan wrote a note on the town of Zhan (Vijaya), where the treasure ships of Zheng He stopped. “Ships from all places come here [for the purpose] of mooring and going ashore. On the shore there is a fort; they have two headmen in charge of it; [and] inside the fort live fifty or sixty families of foreigners, to guard the harbor.” People in Champa, in their trading transaction, “use pale gold which is seventy per cent [pure], or else they use silver” (Mills 1970: 79, 85).

⁵⁸ While this organization gave the state greater efficiency, “the elitist nature of Chinese education contributed to a psychological/cultural distance between literati and peasantry, or court and peasantry” (Lieberman 2003: 341).

allowed for efficient tax collection, and there were *corvées* (from which literate people were exempt) and conscriptions. Fresh advances in agriculture⁵⁹ and at the same time a rise in the population fostered the southward military progress of Dai Viet, which aimed at controlling new territories, as well as the trade transiting through that zone. From 1466, the Vietnamese army was organized along the lines of the Ming army, and supplied with firearms. These transformations gave Dai Viet a decisive advantage against the Chams. The Cham capital, Vijaya, was destroyed in 1471, and the Viet army brought back 30,000 prisoners.⁶⁰ The Vietnamese annexed all the territories north of the province of Binh Dinh. The conquered zones were “Vietnamized” and developed, with the digging of canals and the building of dams. The Dai Viet took advantage of the Chinese withdrawal after 1433: the country exported ceramics imitating Chinese blue-and-white porcelain, and also “red ceramics that were sold throughout Southeast Asia, China, and as far as Turkey, Persia and Japan” (Lieberman 2003: 383). The shipwrecks of Turiang (east of the tip of the Malay peninsula, *c.* 1400) and of Pandanan (in which 72 percent of the ceramics are of Vietnamese origin) show the significance of these exports (Dupoizat 2008). The Dai Viet also exported raw silk and taffeta to Malacca and to Japan. The Vietnamese economy, however, was less dependent on long-distance trade than were the states of Lower Burma and Ayuthia. The wealth of Dai Viet, notes Pires, was primarily based on agriculture.

Expanding trade from the early fifteenth century onward also benefited various states in the Gulf of Bengal. Pegu, which controlled the ports of Martaban, Syriam, and Bassein, has already been mentioned. Further west, acting as an interface between Burma and Bengal, the powerful Arakanese kingdom of Mrohaung controlled the port of Chittagong from 1459 onward. Within Burma, trade routes ran through the Ava kingdom, which was visited by some Muslim merchants and by Chettis, and continued on toward Yunnan (Barbosa 1967). Ava attempted to extend both routes at the expense of Pegu and of the Shan states located in the north. Ava’s decline at the end of the fifteenth century allowed the emergence of the new dynasty of Taungoo. The Ming incursions into Yunnan also led to fighting between Chinese and Shan, in which the Ava kingdom became involved between 1436 and 1449.

The Monetization of Economies during the Second Half of the Fifteenth Century

The second half of the fifteenth century was a period of increasing exchanges, primarily with China, whose trade balance with Southeast Asia was in deficit, according to Frank (1998: 103), while with India it was positive.⁶¹ Expansion favored the widespread use of

⁵⁹ Land terracing activities and the construction of dikes, whose maintenance was controlled by the state, probably resulted from Chinese influences, already perceptible during the Tran period. A new class of wealthy farmers emerged at this time (Gourou 1936: 133).

⁶⁰ V. Lieberman correctly points out that organizational techniques influenced by China – which contrasted with the weak centralization of Cham principalities – helped the Vietnamese expand (2003: 391). Attacks were also conducted against Thai populations, as far as the Upper Irrawaddy (Lieberman 2003: 378–383).

⁶¹ Frank, who gives neither his sources nor the period under discussion (seventeenth century?), indicates that trade with China was eight times what it was with Europe.

money. Currency from Pasai has been mentioned; minted coins also appeared at Pegu, in Thailand, and in Cambodia. Foreign coins were used: Java had long been using Chinese copper coins (the island did not strike gold or silver coinage, but issued copper coins called *picis*, similar to the Chinese but lighter), and Pires notes in the early sixteenth century: “[The Javanese] like our money very much” (ed. Cortesão 1944, 11: 181). The monetization of the Javanese economy resulted in royal taxes being paid in cash and not in kind (Hall 1992: 226).⁶² Like northern Sumatra during the early sixteenth century, Malacca used small tin coins (called *caixa* by the Portuguese); in addition, “xerafin from Cambay and Hormuz, dramas from Pase and silver coins” were used for transactions.⁶³ Strings of Javanese *picis* were also accepted as currency.⁶⁴ Gold and silver played an important role, both as merchandise and as currency (Thomaz 1993: 76). It is not surprising to find that Malacca was the main gold center for eastern Asia.⁶⁵ This metal was primarily exported in exchange for Indian textiles, a practice that probably goes back to the times of earliest contact with India.

The increasing use of money saw the introduction of the notions of capital and interest. “The *Legal Code of Malacca*, the core of which probably dates back to the fifteenth century, contains a passage devoted to commercial law. It defined the conditions of validity of a transaction, with the possibility of questioning a contract, and named the authorities that had the power to settle a dispute concerning weights and measures” (as a last resort the *syahbandar*, or “port master”). Usury was proscribed, but the practice of exchange allowed profits to be made. “Other articles deal with ‘fund deposits,’ which must be carried out before witnesses and with the production of a written agreement; another article deals with ‘financial transfers’; another with ‘bankruptcies’ and, more generally, the notion of debt” (Lombard 1988b: 122–123). A passage was devoted to loans, and another to “gifts of capital”:

If a funding partner tells his agent: “Take these dinars, gold and silver, use them for your trade, and if we make profits, there will be so much for you,” the share of profits should be defined in advance.⁶⁶

Various technical terms were borrowed from Arabic (*muflis*, “bankrupt, having been legally declared insolvent,” *taksir*, “responsibility”), revealing an Arabo-Persian influence. D. Lombard (1988b: 122–123) signals texts of “maritime rules” that are more recent, dealing with the association of a merchant who provided merchandise with an agent in charge of trading operations. It is likely that these rules partly reflected ancient

⁶² However, S. Wicks gives an example of taxes evaluated in monetary terms – and to be paid in gold – as early as Airlangga’s reign (inscription of Kamalagyan, 1037) (1992: 282).

⁶³ Pires, ed. Cortesão 1944, 11: 275. People in Malacca paid for all the merchandise “in tin or in gold . . . There are assayers of gold appointed by the king” (Pires, ed. Cortesão 1944, 11: 275, 276). Malacca issued tin coins from 1450 onward. Prior to that, trade was conducted with tin bars, gold, and foreign currencies.

⁶⁴ These coins were lighter than the Chinese coins; their weight connects them to the ancient Indonesian system and to the *kasha* coin of the Malay world. See van Aelst 1995: 369–370, 387.

⁶⁵ On gold and silver as merchandise, see Whitmore 1983: 364, 376. Gold came mostly from Sumatra (Minangkabau), Pahang, on the Thai–Malay peninsula, the Coromandel coast, “Cochinchina,” and Brunei.

⁶⁶ Quoted by Lombard 1988b: 123. “In case of involuntary loss or bad business, the agent is not formally required to reimburse.”

commercial laws from the Muslim world of the Indian Ocean. At the same time, the Malacca legal code, which gave the merchants certain warranties, had no equivalent in Southeast Asia.

While the growing influence of Islam in merchant networks at this time favored the emergence of sultanates on the Malay peninsula and insular Southeast Asia, this was the continuation of a process seen to be at work since the thirteenth century. The western Indian Ocean also appears to show some continuity, although a rebalancing of activity occurred between the Red Sea and the Persian Gulf, a process that had already begun during the fourteenth century. This continuity, however, was more apparent than real: the formation of the Ottoman Empire on the one hand, and the expansion of capitalistic practices in competing European states on the other, were new features that would undermine Egypt's power, and transform the face of the world.

17 Western Asia: Revival of the Persian Gulf

The caravan [from India] brought with it all kinds of spices, pearls, stones, gold and perfumes, textiles, parrots, cats from India and many other things, which were distributed throughout the world, half going to Babylonia and later to Alexandria, and the other to Damascus and from there to the port of Barut [Beirut].
(Account by Pedro Tafur of his encounter with Niccolò dei Conti, in Conti 2004: 129)

I caught the smell of the vessel, and all the terrors of the sea presented themselves before me.
(‘Abd al-Razzāq, ed. Major 1867: 6)

The Timurids, the “Black Sheep” and “White Sheep” Turkmen, and the Ottoman Empire: A Fluid Political Situation

Weakened by the devastating invasions of Tamerlane’s armies, Mesopotamia and western Iran experienced a checkered history during the fifteenth century. In a state of demographic stagnation or downturn, the region was an easy prey for nomadic Turkmen. The Turkmen, however, never managed to build strong states, owing to a lack of sedentary populations (Martinez-Gros 2009: 643). When Tamerlane died in 1405, the Jalāyerid sultan, Ahmad, who had fled Iraq, came back to Baghdad. Five years later, he died in Tabriz (1410) in a battle led against the Kara Koyunlu Turkmen (“[Those of the] Black Sheep”), who took Baghdad in 1412. Their strongest ruler, Jahan Shāh (1430–1467), controlled Iraq, Fars, and Oman. Tabriz, which was taken in 1406, was the capital of the empire. It was then a major city in Eurasia: Clavijo speaks of “200,000 households within the limits of the city.” “One visitor from Europe estimated the revenue received from [Tabriz] at the beginning of the fifteenth century to be larger than that of the greatest Christian monarch” (Goody 1996: 114). In the eastern part of the former Ilkhānid state, the Timurids (a Turco-Mongol dynasty of the descendants of Tamerlane) maintained relative political stability during the fifteenth century. Shāh Rukh (1405–1447), who succeeded his father Tamerlane, kept control of part of the empire, and moved the capital from Samarkand to Herāt. The significance of this sovereign is reflected in his request to the sultan of Cairo “to cover the Ka’ba with a new veil,” which expresses his claim to dominance over the Holy Places (Loiseau 2009: 33). Ulugh-Beg, an astronomer and mathematician, succeeded him at Samarkand (1447–49) before being assassinated by one of his sons, who had settled at Herāt. A system of – often hereditary – *iqta’* fostered the fragmentation of power in the

Timurid world (Loiseau 2009: 48). Abū Saʿīd (1452–1469), however, managed to maintain a coherent state in the greater part of Iran and the Amu Darya basin. Herāt housed a brilliant intellectual court, in particular under Sultan Husain Bāiqarā (1469–1506); among those in his court were the poet Jami and the miniature painter Bihzad. The prosperity of the country under this sovereign’s reign is partly explained by the intensification of agriculture in the large oases of Khorasan (Loiseau 2009). Tabriz represented another significant cultural center. In reaction to the power and splendor of the Timurid courts, Sufi currents developed, such as the puritan Naqshbandiyya (Sunni) order and the anti-conventional current of the (Shiite) Ḥurūfī (Hodgson 1975: 496). With the exception of Tabriz, during the fifteenth century the urban population of Iran experienced a marked decline from the levels of the pre-Timurid period. The Silk Roads, however, remained active even after Tamerlane’s death.¹ Between 1405 and 1419, “seven Timurid embassies went to Beijing and six Ming embassies went to Herat or Samarkand” (Adshead 1995: 196).² In the years that followed, one still notes the arrival of embassies from Samarkand, Hami, and Turfān (the latter city sent fifty-four embassies between 1407 and 1502). The Timurid period ended at the turn of the fifteenth and sixteenth centuries, when the Uzbeks, ruled by Muhammad Shaybānī, took Samarkand and Bukhara in 1500, and the whole of Khorasan in 1507. Shaybānī, however, would die in 1510 during a defeat by the Safavids.

The cultural and ideological influence of the Timurids, due in particular to the court of Herat, was felt from India to the Ottoman Empire.³ That empire asserted its power during the fifteenth century, under Mehmet I (1413–1421) and Murad II (1421–1451), who took the Peloponnese, imposed a tribute on Serbia, and annexed Thessaly and Wallachia. It forced the Byzantine Empire to pay tribute, after a long siege of its capital from 1422 to 1424, and it won a major victory in 1444 at Varna, in Bulgaria, after a battle that saw the death of the king of Hungary, Ladislas III. The Ottoman Empire expanded further under his son Mehmet II, who seized Byzantium in 1453, Serbia and Bosnia between 1459 and 1463, Crimea in 1475, and Albania in 1478. The role of the Ottoman cannons has often been mentioned in the capture of Byzantium. This “gunpowder empire” (Hodgson 1975, 111)⁴ became more militarized, with improvements in the musket around 1470.⁵ As early as 1500, units of the Turkish infantry were equipped with this weapon.⁶ The Ottoman power also relied on the setting up of an efficient

¹ Unlike the current view that those routes were virtually closed. Despite insecurity on the routes of Central Asia, a significant caravan trade was maintained during the second half of the fifteenth century (Barendse 2000). To the west, it went to Trabzon and the Ottoman Empire.

² The Venetian diplomat Giosafat Barbaro, in Shiraz in 1471, noted that many merchants traveled to Samarkand in order to acquire Chinese goods.

³ The Timurids, as Martinez-Gros correctly points out (2009: 645), were a “legitimizing reference” for the Ottomans. After his victory over Uzun Hasan in 1473, Mehmet II thus writes a letter in the Osmanli Turkish language using both the Arabic alphabet and the Uighur alphabet. In addition, the Ottoman sultans placed Persian “above all cultural languages, alongside Arabic” (Martinez-Gros 2009: 645; Grévin 2009: 659).

⁴ Barendse (2000: 210–211) rightly criticizes this term, which overlooks the significance of the newfound efficiency of the administration.

⁵ The Turks invented a trigger mechanism called “serpentine” (Pacey 1990: 75) (this mechanism may also reflect a Chinese influence). The states of western Europe also developed muskets at the same time.

⁶ The Turkish army included units specially trained and equipped with canons or muskets, the Janissaries, who were often recruited in Christian families from Europe and raised as Muslims; this system, called *devshirme*,

administration, which permitted better collection of land taxes. Highly centralized, the empire employed Byzantine bureaucrats and borrowed part of its mode of governance from Byzantium.⁷ Provinces were organized around a military structure (Barkey 2005: 141), and Mehmet II promulgated a legal code which contributed to the unification of the empire. The state appears to have been more interventionist than the Muslim empires preceding it (Bianquis 2000: 81). It promoted artisan organizations of the guild type, which it regulated, and ran textile workshops producing silk, at Bursa in particular. While changes occurred in the trade routes (the Silk Roads were cut off for some time), the Ottoman Empire fostered trade and encouraged merchants, as seen in this advice given to the prince during the second half of the fifteenth century: “Look with favor on the merchants in the land; always take care of them; let no one harass them . . . , for through their trading the land becomes prosperous and by their wares, low prices abound in the world” (Braudel 2002, 11: 558).⁸ Spices brought by the Damascus caravans were delivered to Genoese merchants in Bursa. Duties on imported products were 2,000 gold ducats in 1487; they subsequently increased to 2,600 ducats (Inalcik and Quataert 1994: 317). Despite conflicts, trade developed between Europe and the Ottoman Empire, and both Flanders and Italian cities such as Venice and Ragusa took advantage of it, especially by exporting textiles. A north–south trade also developed towards Muscovy and Poland in the north, and the Levant and Egypt in the south. A maritime link between Alexandria and Antalya allowed that port to receive spices from India and products from Egypt. A slave trade continued, from the Black Sea to the Mamluk Empire. “In 1420, more than 2000 slaves were thus exported to Alexandria” (Bouchon 2004: 144). Nicolas de Nicolay’s testimony in the middle of the sixteenth century emphasizes the importance of the Jews, and to a lesser extent the Armenians and the Ragusans in the trade sector. The Ottoman power built roads and caravanserais and granted broad freedom to traders, who were taxed very little. One observes some interpenetration between the ruling elite and the merchants,⁹ and state monopolies (for example the timber trade) were leased to private merchants (Inalcik 1978). From the middle of the fifteenth century, however, the revenues of the Ottoman state relied to a large extent on the taxation of agrarian resources.¹⁰

also provided men for the palace and the administration. The Bektashiyya current of Sufism was especially influential in these groups. While these infantrymen were paid, the Timariot horsemen received the fiscal revenues from “fiefs” (called *timar*), according to a system similar to the *iqta’* of the Seljukid Empire. This system had also been in use in the Byzantine Empire (*pronoia*) during the eleventh century.

⁷ According to Hodgson (1975), the “gunpowder empires” – the Ottoman, Safavid, and Mughal empires – “were encouraged to centralize power in order to find resources in copper and tin, control their armouries, and finance their artillery units. In other words, military technology in some ways determined the power structures and the modernization of the state – an assertion that is debatable” (Norel 2009b: 71).

⁸ Beyond the Ottoman world, routes linked Central Asia and Russia, where the state of Muscovy developed during the fifteenth century, and exported furs and gold, in particular. Merchants from Bukhara played an active role between China and Muscovy.

⁹ See Pearson 1991: 100, for a period later than the fifteenth century.

¹⁰ Di Cosmo 1999a: 36. This author notes parallels between the Ottoman expansion and that of the Central Asian empires. However, while militarization was central to the building of the Ottoman state, it was not the result of a crisis in nomadic populations as was often the case in Central Asia. In any case, the emergence of a warrior aristocracy created new needs, requiring specific responses; these involved exploiting trade or taxing agricultural wealth.

The architecture of the Topkapi gardens reflects the consolidation of Ottoman power, which became a central power of the Muslim world at the beginning of the sixteenth century: Mehmet II built three kiosks, “according to the Greek mode, the Turkish mode and the Persian mode. Half a century later, Selim I had the chief architect of the Mamluk sultans, who was deported to Istanbul, as were a large number of craftsmen and notables, erect a fourth kiosk, an image of the Cairo palace,” reflecting “the fulfilment of the ambition” of the Ottoman sultans to expand the influence of the empire “to the four corners of the Islamic world” (Loiseau 2009: 49).

During the second half of the fifteenth century, a new Turkmen power emerged to the east of the Ottoman Empire: that of the Ak Koyunlu (“[The] White Sheep”), who had their capital at Diyār Bakr and later at Tabriz. They established their domination over the Kara Koyunlu and the Timurids under Uzun Hasan’s reign (1453–1478). Because it did not have the resources needed to set up an efficient administration, this state did not enjoy regular tax income (Barendse 2000: 208). It unsuccessfully attempted to obtain help from Venice and other European powers to attack the Ottoman Empire, and was defeated near Bashkent by Mehmet II’s army in 1473. The relations established with Venice fostered the settlement of Persian workers in that city, whose work would influence jewelry making in southern Germany and even England (Sykes 2006: 142). In decline after Uzun Hasan, the Ak Koyunlu were defeated by the Safavids, who took Tabriz in 1501¹¹ by relying on the Shiite Qizilbash (“Red head”) Turkmen. The last of a lineage of Grand Masters of the Sufi order of the Safaviya, the young Ismā‘il – he was only fifteen years old – had himself proclaimed shah and imposed duodecimal Shiism as the state religion. The rise in power of the Safavids should be understood within the broader context of the expansion of the Sufi orders. “The Turk or Turkmen powers relied directly on Sufi brotherhoods, and at times they came from these orders” (Martinez-Gros 2009: 645). In the middle of the fifteenth century, the Safaviya transformed itself into a militant and militarized Shiite order, under the aegis of Shaykh Junayd (who died in 1460). In addition, the Safavids’ “messianic pretensions” should be viewed within the context of the appearance of millenarian movements within the Muslim world: the tenth century of the Hegira started in 1495. Subrahmanyam (2001b) has correctly stressed their underlying political dimension.¹² Safavid expansion was favored by the fragmentation of political power in Iran, but in the west, Ismā‘il was defeated by the Ottomans at Çaldiran, in 1514. Soon after, the latter took Syria and Egypt (1516–1517), under the reign of Selim I. In 1534, Süleyman I (Suleiman the Magnificent) seized Baghdad.

¹¹ The Ak Koyunlu were at that time weakened by their defeat against the Ottomans, as well as by internal revolts and power struggles between competing factions. The diplomatic relations established with the Venetians did not have significant effects (Babinger 1992; Calmard 1995: 328). It is worth noting that Ismā‘il’s mother was Uzun Hasan’s daughter.

¹² As S. Subrahmanyam notes, these millenarian religious movements, at the end of the fifteenth and in the sixteenth century, have to be approached as a whole. In the Ottoman Empire too, during the sixteenth century, Selim and later Sulayman were seen as *mujaddid*, “renovators.”

Hormuz and the Persian Gulf Trade

Merchants were grouping in a number of urban centers, “markets where everything was settled” (Aubin 1988: 87): Aleppo, Damascus, Alexandria, Cairo, Mecca, Hormuz, and to a lesser extent Herat, Shiraz, and Tabriz. The fifteenth century saw a rebalancing between the Persian Gulf and the Red Sea, that had already started during the fourteenth century. Under the Timurids and the Turkmen, trade activity in the Gulf “benefited from the infrastructures put in place by the Ilkhāns . . . Manufacturing centers (Yazd, Kashan, Isfahan, Shiraz, and Tabriz) produced textiles, ceramics, leather and metal items” (Calmard 1995: 337). Iran was a significant silk producer (silk yarn was exported to Gujarat): the quality and price of Persian silk fabrics would weaken the position of the Chinese merchants. The country manufactured imitations of blue-and-white Chinese porcelain (which were also produced in Egypt). Hormuz at this time was a major entrepôt in the trade with India, China, Arabia, and East Africa. The city enjoyed virtual independence: “during the fifteenth century, while the rulers of Ormuz successively acknowledged the suzerainty of the Timurids, the Qara-qoyunlu, the Aq-qoyunlu and later Shāh Isma‘il, this nominal recognition did not compromise their *de facto* independence” (Aubin 1973: 141). Hormuz paid tribute to the successive powers in Iran in order to ensure that the caravan routes stayed open. At least at the end of the fifteenth century, Hormuz controlled a veritable maritime empire, including islands in the Persian Gulf and territories on both the Persian and Arab sides (such as Qalhat and Muscat). Hormuz was a cosmopolitan city, where religious tolerance was the rule as well as a relative sexual freedom (Aubin 1973: 160). According to ‘Abd al-Razzāq, among the merchants sojourning at Hormuz in the middle of the fifteenth century were Kalmak, Chinese from Beijing and southern China, Indonesians,¹³ Indians (Muslims and Hindus), Sinhalese, Thais, Maldivians,¹⁴ and people from Aden and Jeddah, Abyssinia and the Zanj country, Egypt, Syria, and Anatolia (Alam and Subrahmanyam 2007: 59). Jews and Armenians were also present, something that was noted by the Genoese Girolamo di San Stefano in 1498. Each community lived in a separate quarter. The list does not mention any European merchants, however.¹⁵ Hormuz had 50,000 inhabitants at the beginning of the sixteenth century. Customs duties, as Abd ‘al-Razzāq notes, were set at one-tenth of the value of the merchandise transiting through the port. Nīmdihī writes, around 1500, that goods arriving by sea were taxed at 10 percent, and those from Khorasan 5 percent. “The Portuguese describe a more complex system”: textiles from Malacca were taxed at 16.5 percent, Indian textiles at 10 percent, Indian raw cotton and food at 5 percent; goods from Persia were taxed at 5 percent, except silk and alum, which were taxed at 10 percent (Aubin 1973: 173). The bulk of duties came from imports rather than exports. Neither horses nor precious metals were taxed. The city drew more than half of its

¹³ The Portuguese Tomé Pires also mentions merchants from Malacca and Sumatra as present at Aden and Hormuz.

¹⁴ Maldivians probably brought cowries, which were later carried to the Levant, northern Africa, and sub-Saharan Africa by caravan.

¹⁵ Mandeville’s testimony on the presence of Venetian merchants at Hormuz seems dubious. Ma Huan mentions the presence of Egyptians and people from Ferghana.

revenues from trade and customs duties. At the beginning of the sixteenth century, the income of the rulers of Hormuz was 200,000 ashrafis, of which 100,000 came from customs duties (Subrahmanyam 1995: 760). Unlike the rulers of Aden and Malacca, those of Hormuz do not appear to have been directly involved in trade (in that sense, the city was similar to Calicut). Families of viziers, however, played a major political and economic role (Subrahmanyam 1995); at the beginning of the sixteenth century, a vizier was in charge of customs administration, “this position being remunerated by the commissions earned on the trade operations.” Aubin, however, writes: “Beginning with the royal family, the ruling class was involved in trade.” A letter from Pero de Albuquerque, the first Portuguese captain at Hormuz, thus mentions “a vessel belonging to the spouse of the deceased king Sayfuddin” (Aubin 1973: 148). Merchants did not themselves engage in the political life of the city; they sought instead to influence it indirectly. We know of only one merchant (the chief of the guild of fish merchants) who was appointed vizier, at the end of the fourteenth century (Aubin 1973: 170). Hormuz received cotton fabrics from India (from Gujarat and Bengal), wood, sugar, iron, and spices. The latter, primarily imported from Deccan and Gujarat, were mostly consumed in Iran. “Spices are the items least likely to arrive. Of what goes to Basra, only a part reaches the ports of the Levant, which often purchase them via the Red Sea. Albuquerque noted the limited significance of the spices in the trade activity of the Persian Gulf and the inter-Asian character of this trade . . . Pires also states that few spices transit via Hormuz toward the Mediterranean market” (Aubin 1973: 167).¹⁶ Hormuz obtained its rice supply from Gujarat, Goa, and Bhatkal, and purchased wheat from Iranian ports or from Basra (the city’s dependence on importing food was obviously its Achilles heel). The Russian Nikitin considered Chinese goods, for example porcelain, “cheap” at Hormuz. In addition, Hormuz received African and Indian slaves. It exported in particular horses, alum, saltpeter, sulphur, salt, dried fruit, musk, copper items, pearls, silk, and silver (Pires, ed. Cortesão 1944, I: 20–21); some of the silver had come from the Levant and the Ottoman Empire. Men were also brought into India: according to Pires, there were 10,000 to 12,000 Persian men-at-arms in Deccan around 1510, “a great number of them Turks” (Aubin 1973: 175). Gujarat bought few horses, but it was the main trading partner of Hormuz: it was via Gujarat that Hormuz “obtained products from Insulindia, and textiles from Cambay, Chaul and Dabhol” (Aubin 1973: 170). The city also maintained close relations with Bhatkal, the great port of Vijayanagara, which bought horses from the Persian Gulf. In addition, Hormuz had contacts with Africa, direct or otherwise, since at times the city exported giraffes to China. Ma Huan also writes that its silver money “is in universal use” (Mills 1970: 167).¹⁷ Hormuz was visited on several voyages by Zheng He’s fleet, and sent embassies to China in 1414, 1416, 1419, 1421, and 1433 (Ptak and Kautz 2001: 49ff.). The significance of this city, “the key to Persia,” explains the interest shown by the Portuguese during the early sixteenth century: they seized the place in 1515.

¹⁶ Clavijo, the ambassador of the king of Castile to Tamerlane’s court in 1404, points out the wealth of spices on the markets of Sultaniyya (northwestern Iran), however.

¹⁷ It has been questioned whether Hormuz issued money, as the city was the vassal of the Timurids. Moreover, gold coins were in use.

Ports were also active on the southern coast of Arabia, especially Zafār and Shiḥr, which had ties to the Persian Gulf, India, and East Africa. Hadrami merchants went to Gujarat, Calicut, and later to Malacca. Shiḥr has yielded various Chinese ceramics: Longquan celadon, white stoneware from Dehua dated to the fourteenth century, Ming blue-and-white porcelain, and also large “Martaban” jars dated to the sixteenth century (Hardy-Guilbert 2001). Many Hadramis traveled to East Africa during the fourteenth and fifteenth centuries, where they were known as Shiḥris.

In parallel to the Persian Gulf, trade remained active in the Red Sea during the fifteenth century, with crucial transformations in the networks, primarily due to the new policy of the Egyptian Mamluks and the changes affecting Yemen.

18 Egypt and Yemen: Advances in State Trade and the End of the *Kārimī*

In 829 [1426], the pilgrims had to suffer a kind of abuse previously unknown. Merchants were forbidden to go directly from Mecca to Syria, during the time of the holy pilgrimage, with the merchandise from India they had bought: they were forced to go to Egypt with the caravan, so that taxes could be levied on everything they had with us.

Each year, at the time when the vessels from India arrived at Jidda, [an officer] went to Mecca, levied taxes on the merchandise [brought by these vessels] and came back to Cairo. The Treasury [thus] received more than 70,000 dinars, not to mention the amounts that were not carried back [to Cairo].
(al-Maqrizī, quoted in Vallet 2010b: 659–660)

Egypt, between Two Threats

Unlike Europe, Egypt suffered lasting effects from the plague of 1347, and the disease came back periodically (no less than fifteen major outbreaks occurred between 1360 and 1500).¹ The early fifteenth century, under Faraj ibn Barqūq's reign (1399–1412), was once again marked by famine (1403–1404), plague (1406), political unrest within the country, and external threats, both from the Ottomans and from Tamerlane's armies, which reached Damascus in 1401.² Upper Egypt was in the hands of Arab or Berber rebels. Throughout the country, agricultural land was abandoned, and “the yield of the *iqṭāʿ* revenue assignments was lastingly compromised” (Garcin 1995b: 360). The country's population was just over 4 million inhabitants (Martinez-Gros 2009: 639). A monetary and economic crisis then struck Egypt and Syria, whose trade balance was once again negative. Silver dirhams came to be issued only intermittently, and copper fulus and dirhams were now in use.³ The sultan Faraj was forced to borrow money from *kārimī*, especially from a member of the al-Maḥallī family, from whom a few months later he took more than 100,000 dinars (Apellaniz 2009: 67). The increase in urban wages and the maintenance of land rents in the *iqṭāʿ* system required a high level of exploitation of the peasantry, which held back agricultural progress and demographic growth (Findlay and O'Rourke 2007: 130). During this first half of the

¹ Boucheron and Loiseau (2009: 671) give an estimate of 27 epidemics in Damascus between 1363 and 1514, and 55 in Cairo during the same period.

² While the Mongol attack on Ankara in 1402 probably saved Egypt (as well as Byzantium), Turkmen occupied the region of Aleppo at the beginning of the fifteenth century.

³ Ashtor 1976: 305. As of the mid-fourteenth century, copper coins became the main means of payment. Copper was imported from Europe (Venice) and perhaps from Mali. However, at times, even copper was in short supply, for example during the 1430s, partly due to its export to India.

fifteenth century, heavy taxes were levied on artisans and merchants. Industrial production was now in an unfavorable position compared to Europe: taking advantage of the decline of the Egyptian workshops, Italy was exporting silk and fustian, a blend of flax and silk. Fustian took its name from the city of Fustāt, which had previously exported it. In 1434, there were only 800 looms in Alexandria (Ashtor 1976: 307), down from several thousand in 1390. The historian Al-Maqrīzī (1364–1442) lamented the Egyptian “fashion”: “instead of wearing good Egyptian clothing, people now wore all kinds of textiles made in Europe” (Mielants 2007: 150 n. 53). The Italians bought alkali in Syria to produce soap and glass. “Venetian Murano glass displaced Syrian glass as the industry leader” (Findlay and O’Rourke 2007: 129). The sugar industry was also in decline. Moreover, relations with Yemen grew tense during the early fifteenth century, a situation aggravated by the emancipation policy of the sharif of Mecca, Ḥasan bin ‘Ajlān (see below). While all this probably had negative effects on trade, Egypt still benefited from the key advantage of being a hub between the Mediterranean and the Indian Ocean for Indian and oriental spices, an advantage from which Faraj attempted to profit. His financial problems provided the incentive for an innovation that his successors would adopt more fully: in 1411, “the Catalan merchants from Alexandria were requested to buy spices for a value of 30,000 dinars” (Apellaniz 2009: 68).

For Faraj’s successor, Al-Mu’uayyad Shaykh (1412–1421), “trade became a necessity,” given a disastrous internal situation and the financial issues he faced. Due in part to a crisis between the sharif of Mecca and the sultan of Yemen,⁴ the surge in pepper prices between 1412 and 1419 offered Al-Mu’uayyad Shaykh a fantastic opportunity. From 1414, the sultan forced the Venetian merchants to buy spices from “state merchants known as *Khawājā*,” who were chosen from “an elite group of international traders” (Apellaniz 2004: 296; 2009: 73). This strategy, however, was a failure, at least temporarily, as the price forced on the Venetians was considerably higher than the market price, and eventually the merchants were unable to repay their debts. More satisfactory negotiated solutions would appear in the years that followed.

The emergence of merchants of the sultan (*khawājā*) signified the formation of a “new financial elite associated with the political power” (Apellaniz 2009: 74ff.). The largest financial grouping was probably that of the Banu Muzalliq, who built their fortune on the Indian trade. Members of this family would play a prominent role throughout the fifteenth century.

It was not until Barsbāy’s reign (1422–1438) that a revival – perhaps a mere semblance of revival – of the Mamluk state occurred, when the state reached its apotheosis. Egypt clearly appeared as the main power in the Muslim world; the country received embassies from the sultanates of Delhi and Bengal, and from the Bahmani Empire. The fighting among Turkmen in Iraq made the Red Sea a mandatory route for international trade, thus offering the Mamluk state its “Indian summer.” Silver from Central Asia exported by the Timurid Empire made new issues of dirhams possible in Syria and Egypt as early as 1412 and 1415.⁵ In addition, a significant proportion of the

⁴ The sizeable purchases of pepper by Chinese ships belonging to Zheng He’s fleets also contributed to an increase in price.

⁵ Ashtor 1971: 45. Al-Mu’uayyad Shaykh was able to seize a Syrian treasury of silver coins, after the defeat of his rival Nawrūz (Bacharach 1983).

gold ducats minted by Venice were brought to Egypt and Syria by Italian merchants.⁶ That is why the regions of “the first part of India used Venetian ducats” (Conti 2004: 118). Barsbāy issued new gold coins, which would be called *ashrafi*. They no longer followed the ancient *mithkal* standard of weight, but the standards of Venetian ducats, which were lighter. New silver dirhams, smaller and lighter than those issued previously, also marked a *de facto* devaluation of the currency (Schultz 1998: 335–336). In addition, fulus were issued in 1435.

Perpetuating the policy of an-Nāṣir Muḥammad, Barsbāy increased the Sultan’s share of property revenues. More importantly, in order to compensate for declining agricultural incomes and meet rising expenditures, he imposed state trade and used the services of the great merchants, *kārimī* and others, who often played the role of diplomats (Vallet 2006: 533–535). Several families of traders came from Iran at this time, driven to migration by the Timurid invasions.

The policy of controlling the spice trade was progressively introduced, starting under Al-Mu’uayyad Shaykh, in conjunction with politico-economic developments in the Red Sea at the time (Meloy 2003). During the 1420s, in fact, the *kārimī* were confronted with new hardships. The customs duties levied by the Rasūlid sultans of Yemen became so high that the merchants tried to bypass the city. Many *kārimī* fled to India and Jeddah.⁷ In 1421, the emperor of China himself sent a protest against the Yemeni ruler (see below). Al-Maqrīzī notes:

It had been the custom that merchant ships from India went to Aden; no one had ever seen them sailing further than Aden. In [8]25 [1422], a *nāḥūdā* named Ibrāhīm left Kālikūt; when he arrived in the Bāb al-Mandab, he veered to Jidda with his vessel, he was angry at the Yemeni ruler, because of the mistreatment of the merchants . . . He came back in [8]28 with 14 ships laden with merchandise. The sultan of Egypt heard of him and wanted taxes from him . . . From this time onward, Jidda became a significant port and Aden was almost completely bypassed [by the merchants]. (Vallet 2006: 520)

In 1424, Ibrāhīm met a Mamluk emir at Jeddah. While 14 ships sailed with him in 1425, they numbered 40 in 1426, “ships from India and Hormuz” (Vallet 2010b: 656). An anonymous chronicle even mentions the passage of a ship from Sumatra in 1430 (Vallet 2010b). It may be that the Egyptian sultan Barsbāy had decided to attract merchants from India. The port of Jeddah was taken over by the Egyptian Mamluks in 1425⁸ (Egypt, however, failed in its attempt at direct governance of the Hijāz, and was obliged to share the revenues from the transit trade with the sharif of Mecca) (Meloy

⁶ “At the beginning of the fifteenth century, gold coins from Venice and Florence enjoyed the status of legal tender” in Egypt (Garcin 1995b: 363). According to the doge Mocenigo (1414–1423), Venice issued 1,200,000 gold ducats each year, and 800,000 silver coins. Between 300,000 and 500,000 ducats were exported to Egypt and Syria. As early as the late fourteenth century, al-Maqrīzī was writing that Venetian gold currency covered the earth. At the beginning of the fifteenth century, however, the value of the commodities exported by Venice clearly exceeded the value of coins exchanged for spices and other products (Ashtor 1971: 65–66, 70). Venetians and Egyptians united in partnerships, and S. Y. Labib (1969: 91) even mentions a *commenda*.

⁷ According to E. Vallet (2010b: 666), quoting al-Fāṣī, the last mention of “ships of the *Kārim*” dates from 1420.

⁸ Digby 1982b: 145, referring to al-Maqrīzī (Vallet 2010b: 659).

2003: 11ff.). Measures taken regarding pilgrims (see above) also reveal a desire to “ensure maximum benefit” from the increasing trade transiting through the Hijāz, where Syrian merchants had recently settled (Vallet 2010b: 659). In 1429, Barsbāy decided to control the spice trade for his own benefit and to fix prices on the market,⁹ which – temporarily – slowed down the activity at Alexandria.¹⁰ The trade in pepper was particularly lucrative, since “a load of pepper cost a maximum of 2 dinars in the export ports, but in Mecca in 1412, it cost 10 dinars, and Barsbāy [later] forced the Franks to pay a charge of 80, 100 and even 120 dinars” (Darrag 1961: 229).¹¹ In addition, he forced the Indians “to carry back raw copper, coral and other European goods that he had monopolized” (Darrag 1961). “Barsbāy also established more or less permanent monopolies on sugar, some textiles and even on wood” (Vallet 2010b: 662 n. 156). These monopolies did nothing to galvanize production and trade:¹² as early as 1427, “the sultan forbade farmers to cultivate sugarcane outside his land, which gave him an absolute monopoly on the production” (this measure would be implemented again in 1430) (Clot 1996: 157). Barsbāy’s policy “implied a strict control of the Red Sea and the Hijāz,¹³ through which spices had to transit” (Garcin 1995b: 348): Jeddah was imposed on the merchants as the port of entry and taxation for spices. To secure his grip on trade, Barsbāy ordered the ships to bypass ‘Aydhab, which caused the local populations to revolt. Barsbāy destroyed the city in 1426, and extended his control over Sawākin. Under Barsbāy, “Jeddah alone yielded a revenue of 200,000 dinars to the treasury each year” (Subrahmanyam 1995: 762). In addition, the sultan attempted to discourage Syrian and Egyptian merchants from acquiring goods in Yemen, by doubling their taxes.

The scholar Al-Qalqashandī (1356–1418) had pointed out that it was advisable “to treat [merchants] justly, for the profits accruing from them . . . are very great” (Subrahmanyam 1995: 762). However, Barsbāy chose a different policy, undermining the positions of the great Persian merchants on whom his predecessor had relied: in 1425/1426, the properties of Fakhr al-Dīn al-Tawrīzī and ‘Alī al-Jilānī were confiscated, and al-Jilānī left to live in Aden (Vallet 2010b: 662).¹⁴ In 1432, the *kārimī* trade was

⁹ In 1429, also a period of low Nile flooding, the sultan “cornered all the wheat available on the market in order to sell it at huge profits the ensuing year – which happened to be a year marked by a plague epidemic. He did the same thing in 1432 and 1436” (Clot 1996: 156).

¹⁰ As the dominant power in the Mediterranean, Venice attempted to negotiate the abandonment of the Egyptian sultan’s monopoly on spices (Garcin 1995b: 361).

¹¹ Around 1426, notes Meloy (2003: 7), the sultan bought pepper at 50 dinars per load, and sold it to the Venetians at 130 dinars.

¹² During the previous century, Ibn Khaldun had warned against state involvement in trade: for him, “the transgression of the spheres of market- and non-market exchange is the sign of a beleaguered state” (Cheddadi 2006: 49–67; Vallet 2010b: 696). However, “Meloy (2003) argues that the Mamluk Sultan Barsbāy did attempt – albeit temporarily – to implement a more mercantilist strategy favoring Egyptian merchants” (Mielants 2007: 85 n. 88). The state control of trade (by the sultan’s house) was prejudicial to the *kārimī*, and also to “the aristocracy of the emirs.” “This new configuration was costly: it forced the sultan to buy himself the largest possible number of soldier-slaves” (Loiseau 2009: 47).

¹³ In the Mediterranean too, in order to control trade, Barsbāy launched an expedition in 1427 to Cyprus, whose ruler became a vassal of the Egyptian power.

¹⁴ Fakhr al-Dīn al-Tawrīzī was fined 100,000 dinars. The life stories presented by E. Vallet clearly show that the great merchants could make significant profits from being instrumentalized by the Egyptian or Yemeni state – thanks to the capital resources available to them, reduced taxes, and the dominant position they enjoyed on the networks – but this advantageous position involved high risks.

Table 18.1 *Price trends for pepper and ginger during the fifteenth century at Alexandria*

Years	Exports from Alexandria	
	Pepper (<i>ṣportas</i> of 225 kg)	Ginger (<i>kintar fulfuli</i> of 25 kg)
1404	1,440	704
1408	707	20
1496	1,520	4,800
1497	2,000	6,208
1498	1,588	5,672

placed under a special authorization granted by the Egyptian sultan, and heavy taxes were levied on merchants. The situation of the *kārimī* merchants became so difficult that some of them fled to Calicut and Cambay,¹⁵ while others were appointed merchants of the Egyptian sultans, sometimes benefiting from the fact that these positions were now leased. An elite of Sultanic *khawāja* merchants enjoying charters of privilege thus collaborated with the state; these merchants forged links with both political and religious notables.¹⁶ While integrated into the administrative structures, they kept their private businesses (Apellaniz 2009: 107ff.).¹⁷ The transformations of the networks and the new state policy finally led to the disappearance of the *kārimī*. According to Labib (1978), the two last known *kārimī* from Egypt died in 1491–1492;¹⁸ nevertheless an international merchant class remained, with increasing links to the Mediterranean (primarily Venetian) networks, in particular via the Levant.

The volume of trade in the Red Sea, however, was unaffected by Barsbāy's policy and that of his successors. Available figures show an increase in the quantities of spices that were traded (Ashtor 1976: 328), with the fall in prices during the fifteenth century also signifying an overall decrease in transaction costs (Apellaniz 2009: 138) (see Table 18.1).

¹⁵ The amount of capital leaving the declining Egyptian core to be invested in the rising powers of Cambay and Calicut is not known. It is unlikely, however, that the investment of *kārimī* capital in India, however sizeable it may have been, played a significant role in the expansion of those regions.

¹⁶ Some of these merchants became *cadis*, for example Badr al-Dīn Ḥasan, Ibn al-Muzalliq's son, who was in charge of the spice trade in Syria (Apellaniz 2009: 131).

¹⁷ Jamāl al-Dīn Yūsuf, the chief of the Private Office of the sultan from 1437 to 1458, provides a good example of this for the period that followed, since he also participated in international trade on a private basis, as a trader or banker (Apellaniz 2009: 124). This interpenetration between state and private sectors partially explains the frequent confiscations by the sultans of their *khawāja*'s wealth. The existence of a collective term (*Khawājikiyya*) does not mean there was a guild for this financial and merchant elite, often of Syrian origin. Note that this state system was not entirely controlled by the private office of the sultan, and that this private office did not manage all the revenues of the royal treasury. There was no truly centralized bureaucracy to underpin the state trade. Fakhr al-Dīn al-Tawrīzī, who controlled the taxes levied on Indian ships at Jeddah, did not belong to the private office of the sultan (Apellaniz 2009: 95, 102).

¹⁸ Ibn Mājid, however, writes at the end of the fifteenth century of merchants from Egypt who go to India; he mentions their nautical directory, the *Rahnāmaj*. While J. Aubin (1988: 86) wonders whether one of the reasons for the disappearance of the *kārimī* may have been the shift of trade networks from Calicut to Diu at the beginning of the sixteenth century – a phenomenon probably due to the Portuguese blockade of Calicut – this disappearance of the *kārimī* first began in Egypt, during the fifteenth century.

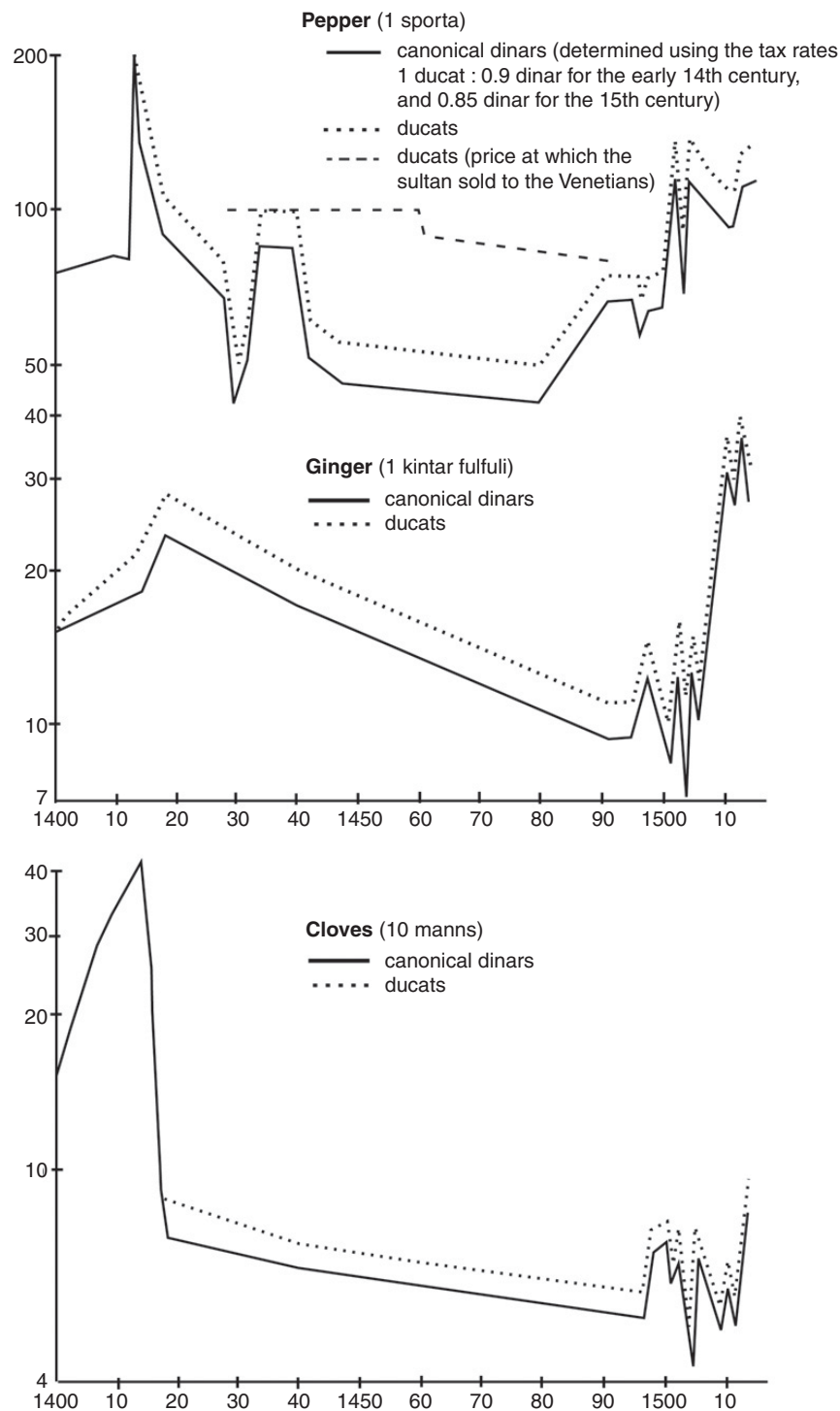


Figure 18.1 Price trends for pepper, ginger, and cloves during the fifteenth century at Alexandria (according to Ashtor 1976 and Vallet 2012)

The size of the caravans is also worth noting. In 1503, the Italian Varthema traveled from “Mezeribe” (Mzebib, in Syria) to Mecca with a caravan of “35,000 camels” (Varthema 1863: 18) – an estimate that is certainly exaggerated.

The measures taken by Barsbāy provided only a temporary solution to the state's financial problems. The costs of the military expeditions that the Mamluk sultans conducted during the first half of the fifteenth century in fact aggravated the impoverishment of the Egyptian economy: for Ashtor, it is those expenses, and not the negative trade balance with India (1971: 99), that explain the silver shortage during the fifteenth century. That trade deficit did, however, lead to a significant drain of money from Egypt toward Yemen and India (Vallet 2010b: 665).

Moreover, the capture of Byzantium by the Ottomans put a halt to the slave trade from the Black Sea. This blockage was detrimental to Egypt, which tried unsuccessfully to compensate for the shortage by boosting the African slave trade (Rosenberger 2000b: 120). In addition, political difficulties broke out with Ethiopia, which sought to develop trade in the Red Sea from the port of Sawākin.

Following a period of tensions with Venice, from 1449/1450 onward, the Egyptian government under Sultan Jaqmaq's reign (1438–1453) established “a negotiated regime of official purchases of spices by the Europeans”: the mandatory purchase of stocks of spices allocated to merchant communities was the condition “for the merchants' future access to the ‘free market’” (Apellaniz 2009: 103, 116). Before 1450, the price was negotiated each year; after that date, the price for spices was fixed. As Apellaniz points out (2009: 142), the aim of the system was not to maximize profits, but to ensure a constant inflow of money.

A large part of the Sultanate's spices arriving in Jeddah were carried to the port of Al-Tor, in the Sinai, whence they were transported to the Levant (“private investors sent their caravans to different ports, such as Qusayr”). The merchant sector appears to have been “highly concentrated” at this time, the merchants of Aleppo and Damascus dominating in the “Indian” trade (Apellaniz 2009: 136).

Venice, which had begun to send convoys of ships – the *muda*, managed by private societies – during the fourteenth century, eventually accepted this managed trade. In fact this type of trade suited the Mamluk rulers as well as the Venetian patricians who controlled most of the trade and political power in the city-state.¹⁹ Moreover, the Red Sea was of crucial importance for the Europeans following the Ottoman capture of Byzantium.

The long reign of Qā'itbāy (1468–1496) was the apotheosis of the Mamluk second age, prior to its fall. Cairo had approximately 400,000 inhabitants (Morris 2013: 148). The sultan revived the policy of trade control instituted by Barsbāy.²⁰ “By securing resources through the benefits of long-distance trade, the Mamluk state,” as J.-C. Garcin correctly points out, “acquired new stability, but had also become more vulnerable,” since it depended on activities it did not control (Garcin 1995b: 363; cf. also Apellaniz 2009: 237).

¹⁹ While J. F. Apellaniz (2009: 150) writes of a “political instrumentalization of the merchant guilds” by the state, the real picture was one of instrumentalization of the Venetian state by the patricians who controlled trade with Egypt and the Levant (indeed see Apellaniz 2009: 167). The different structure of Genoese commerce did not quite satisfy the expectations of the Mamluks. The Genoese were, however, present in Syria and Egypt (Apellaniz 2009: 157ff.).

²⁰ There was no “monopoly,” however. In 1503, the Venetian Sanudo notes that “the caravans that have arrived in Cairo have brought Sultanic and private spices in equal amounts” (Apellaniz 2009: 226).

Throughout the fifteenth century, the Egyptian state experienced a shortage of precious metals, and copper coins were again minted under Qā'itbāy. This was due not so much to insufficient supply or to the negative trade balance as to significant hoarding, the profligacy of the rulers, and massive military spending.²¹ While the sizeable grants made by Qā'itbāy to mosques and schools diverted part of the state revenues,²² it was mainly military campaigns that ruined Egypt: “between 1468 and 1473, seven military campaigns cost 3,700,000 dinars, 1,700,000 of which were spent to meet the requirements of the Mamluks” (Apellaniz 2009: 171). In addition, the army was increasingly composed of mercenaries. Military efficiency had been the basis of Mamluk power during the thirteenth and fourteenth centuries, but by the fifteenth century that power appeared less daunting. While it is probably true that the system was resistant to technical modernization, of which – by contrast – the Ottomans took advantage, with the increasing use of firearms (Ayalon 1956; Findlay and O'Rourke 2007: 133), the failures primarily resulted from the weak political cohesion of the army and disintegration of power at the end of the fifteenth and the beginning of the sixteenth century (Apellaniz 2009: 265). An Egyptian army was defeated at Edessa in 1480 by the Ak Koyunlu. An offensive against the Ottomans conducted from 1483 onward produced no tangible outcome. Peace was signed at last in 1491 “with an effort that [undermined] the internal balance of the empire”: “revolts of recruits led to the temporary abdication of the sultan, the urban populations rose against fiscal abuses, [and] the Bedouins dominated the countryside” (Garcin 1995b: 364). Moreover, tensions increased with the Ṭāhirids of Yemen, who had replaced the Rasūlid dynasty in 1454. Egypt would go so far as to send an expeditionary force in 1517. From 1478 to 1488, Qā'itbāy's military expenditure amounted to over 7 million dinars. The burden of defense expenditures is obvious if we compare this amount against the trade balance with southern Europe and the tax revenues generated by the spice trade: under Barsbāy, in 1425, the value of spices imported from India reached 700,000 dinars, of which the state took nearly 50 percent (Ashtor 1971: 80, 96). The price to be paid for the grant of state positions increased, exacerbating the inefficiency of the administration and the misappropriation of funds, to which the Mamluk power responded with confiscations of wealth. Qā'itbāy “carried out a purge of the various bodies of the army” (Apellaniz 2009: 173). The sultan tried to augment his profits from spices: in 1480, “he demanded that he be paid 110 ducats for a *sporta* of pepper, when the market price was only 50 ducats. The Venetians refused, but were subsequently refused permission to leave until they had paid 70” (Lopez 1987: 388; Findlay and O'Rourke 2007: 131). In 1489, by contrast, the Sultan's pepper was offered at below the market price (Apellaniz 2009: 189). At the same time, difficulties arose due to the considerable indebtedness of the Venetian merchant community (Apellaniz 2009: 180ff.). The rarity of gold and silver led to higher interest rates, which reached 18 to

²¹ On these issues, see Ashtor 1971: 97ff. The scarcity of precious metals, as Ashtor shows, was in fact the result of a long evolution. Hoarding “diminished the quantity of money circulating in the economy” as well as “the money invested in trade and industry” (Ashtor 1971: 103). See also Bacharach (1983: 173), who writes of “political, economic and monetary chaos” for Egypt during the fifteenth century (especially under Qā'itbāy's reign).

²² Apellaniz, however, notes that Qā'itby finally “reduced the revenues of religious foundations and of the staff they employed” (2009: 173).

24 percent, “while the rate had been 4–8% at the time of the Crusades” (Ashtor 1976: 324). At the end of the fifteenth century, the Mamluk power was weakened by internal upheaval, and the resurgence of famines and epidemics in 1491–1492 and 1504–1506. During the fifteenth century, Egypt never returned to the agricultural prosperity it had enjoyed during the early fourteenth century: while the revenues from land taxes at that time had reached 10 million dinars, they amounted to only 2 million dinars at the beginning of the sixteenth century (Guichard 2000: 196). The increase in tax-exempt *waqf* lands (“a legal loophole to perpetuate a heritage” [Loiseau, 2009: 48]) further exacerbated the problems with tax revenues.

Industry itself was no longer competitive, and this from as early as the beginning of the century (see above). The quality of Egyptian textiles was declining at the end of the fifteenth century, and the Egyptians could not compete with European production (Mielants 2007: 138). The trade balance with India was markedly negative, a situation that was not new – the Geniza documents reveal the preponderance of payments in cash as early as the middle of the twelfth century. When trade grew during the thirteenth and fourteenth centuries, gold and silver were used to acquire Indian goods. During the fifteenth century, Egypt paid for spices with gold and copper, and by the end of the century, the *ashrafi* (the gold currency issued by Barsbāy) was the most commonly used in Calicut.

The Portuguese also had a hand in the weakening of Egypt during the fifteenth century and into the sixteenth. From 1444 onward, they were present south of Cape Verde and diverted a share – smaller than previously asserted (see above) – of the gold from Sudan, although part of that gold still reached Egypt through European purchases in ducats. In addition, Egypt and West Africa remained in regular contact through caravans that departed from Mali and later from Songhay.²³

The Portuguese irruption in the Indian Ocean would further worsen Egypt’s situation at the beginning of the sixteenth century: for a few years, spices arrived in much smaller quantities, and prices rose (riots in Hijāz, however, were also responsible for this declining trade). There was a severe shortage of precious metals in Egypt and the gold, silver, and copper coins were of poor quality. The Mamluk state finally attempted a riposte. After having vainly complained to the pope about Portuguese aggression, Sultan Qānṣawh, who had succeeded Qā’itbāy, built a fleet that he sent to the Indian Ocean, but this fleet was defeated off Diu, in Gujarat, in 1509. A second fleet, built with the help of the Ottomans, would only prevent the Portuguese from entering the Red Sea.

However, it was primarily the policy pursued by the sultans that brought Egypt to ruin. At the beginning of the sixteenth century, in order to finance government expenditures, the state implemented new taxes: in Jeddah,

the governor imposed a tax on the traders from India, but at ten times the rate, and these traders too left the port of Jiddah, so that the situation headed for ruin: thus muslins, rice and hides became rare, and the port was abandoned. The same was done in the ports of Alexandria and Damiette. The European traders ceased to frequent them on account of the multiplicity of arbitrary taxes and thus the merchandise imported from Europe disappeared. (Subrahmanyam 1995: 762, quoting Ibn Iyās)

²³ See the testimonies of Malfante (mid-fifteenth century) and Ca’ da Mosto (1455–1456) (Devisse 1972: 381).

The fact that the Turkman Uzun Hasan succeeded in having his name recognized at Medina in 1473 bears testimony to Egypt's overall decline. The relative weakening of the Egyptian armies, not very receptive to the new firearms technologies, has been pointed out. As Palat notes, from Mamluk Egypt to Japan, "professional cavalry looked down on harquebusiers and cannoneers" (2015: 73). The Mamluk army was also affected by internal divisions, and was in the end incapable of opposing the Turkish forces. In 1517, the Egyptian state disappeared, in the aftermath of a defeat by the Ottomans one year earlier, to the north of Aleppo.

Yemen: From the Rasūlid Decline to the Short-Lived Ṭāhirid Revival

When the Adeni merchants suffered injustices at the time [of the sultan] al-Nāṣir al-Jassānī, they fled to Jidda, India and the Malabar coast. The merchant Ṣalāḥ b. 'Alī left for the Malabar coast and the [sultan] confiscated his assets. (Bā Makhrama, quoted in Vallet 2010b: 655)

Finding in Jidda the safety and tranquility that they had not enjoyed in Aden, the merchants abandoned this port and gave a new life to the port of Jidda, which greatly flourished. For this reason, Aden declined, and the situation of the Yemeni ruler grew weaker and weaker. (al-Maqrīzī, quoted in Vallet 2010b: 664)

At the beginning of the fifteenth century, Aden was the "obligatory transit point" between Egypt and India, and toward Africa.²⁴ Ships sailed to Jeddah, where goods were transferred to smaller boats or carried by caravans to Syria. A customs house was created at Jeddah in 1403, modeled on the one in Aden. The port of Aden provided the majority of the revenues of the sultans, who lived at Ta'izz.²⁵ "In 1411, the port dues at Aden stood at 1,470,000 dinars, as per the calculations of Serjeant" (Chakravarti 2012: 82). The sultans themselves were involved in trade, so that "the rise of the sultanian *matḡar* of Aden relegated the ancient Customs House to a secondary position" (Vallet 2010b: 626).

Sultan al-Nāṣir Aḥmad's reign (1400–1424), however, was marked by a breakdown in sultanic power, resulting both from internal and external factors. The disturbed personality of the sultan, especially at the end of his life, was the primary cause of this disintegration; the economic difficulties that followed, coupled with the needs of the state, led to practices that were intolerable for the merchants. Ibn al-Dayba' (a chronicler of the Ṭāhirid dynasty) writes: "Injustices occurred at the end of his reign, such as the compulsory purchase of silk at a price above its market value; favors granted to heretics such as Ibn al-Unf, al-Kirmānī the Sufi and Ibn Rūbak, which exasperated the merchants and the rest of the population ... He lost control of most of the

²⁴ Devisse 1985: 712. See the route followed by the Genoese merchant Girolamo di San Stefano, at the end of the fifteenth century, from Kenh, on the Gulf of Suez, to Massawa then Aden, and from there to the Maldives and Calicut (Digby 1982b: 145). Ma Huan mentions the export of various African animals (lions, giraffes, and zebras) via the port of Aden (Mills 1970: 158).

²⁵ In 1411–1412, according to the *Mulakhkhaṣ al-fiṭan*, the port revenues amounted to 1,470,000 Maliki dinars (compared to 600,000 in 1228/1229), and the state revenues were 2,320,500 dinars (Margariti 2007). These revenues would diminish from 1414 onward.

fortresses in the mountains. His brother Ḥusayn revolted against him, and at the end of his life, he took to drink” (Vallet 2006: 77). He thus alienated the merchant class, and lost the support of the men of religion of lower Yemen. Moreover, the abandonment of the wadis of the Tihāma at this time went hand in hand with urban decline in the region (Vallet 2006: 565).

Three of the great Chinese expeditions in the Indian Ocean stopped at Aden. The fifth expedition, in 1419, was marked by its lavish offerings to the Rasūlid sultan al-Nāṣir: gold embroidered silk, musk, storax, and porcelains. The sixth expedition, in 1421, again brought sumptuous gifts, but the Chinese envoy stood before the sultan “without kissing the earth” and said: “Your Master the Lord of China greets you and counsels you to act justly toward your subjects,”²⁶ an admonishment referring to the excessive taxes levied by Sultan al-Nāṣir. This episode also reveals how the Chinese saw their place in the world. The exploitation of the merchants by the sultan, against a background of social and dynastic crisis, precipitated the fall of the Rasūlids and contributed to change in the structure of trade. The absence of issues of Rasūlid currency after 1421 is indicative of the difficulties encountered by the state (Vallet 2006: 548).

Moreover, during this period, the rise of Hijāz, linked to a growing caravan trade with Yemen, was a threat to the country’s position. Merchants from Aden migrated to Mecca, where the position of the emir, Ḥasan bin ‘Ajlān, was strengthened (Vallet [2006: 521] writes of an “institutionalization of the links between power and trade at Mecca” at the beginning of the fifteenth century). The growth of trade between the Red Sea and India, as well as new political and economic factors in India, resulted in spectacular donations made at Mecca by the Bahmanid sultan, the sultan of Bengal and the sultan of Gujarat, donations which conferred legitimacy (Vallet 2010b: 675). This rise to prominence led to a dispute with the Rasūlids, marked by reciprocal confiscations of goods, and repeated boycotts of the port of Jeddah decreed by Sultan al-Nāṣir from 1410 onward. The crisis resulted in prices for pepper soaring at Alexandria from 1412 (Vallet 2012). However, a state-to-state trade was instigated between Egypt and Yemen, and the emir of Mecca, Ḥasan bin ‘Ajlān, appears ultimately to have suffered most from the confrontation with Yemen (Vallet 2010b: 635–639, 649).

During the 1410s, Yemen “still controlled the Kārim” (Vallet 2010b: 648–649), but the amount of taxes levied and the abuses suffered by traders led to a reaction on the part of the great merchants. In 1422, a shipowner from Calicut decided to bypass the port of Aden while entering the Red Sea, a movement that gathered momentum during the following years (see above).

Al-Nāṣir’s personality and Yemeni internal problems were not the only factors responsible for the new situation. Egypt’s policy played a role in the restructuring of the networks, as did the increasing significance of Hijāz. The higher tax burden on merchants was also due to the decline of Rasūlid influence in the world-system.

Following al-Nāṣir’s death, the sultan al-Zāhir (1428–1439) attempted a forceful response to the bypass of Aden by ships from India; he also tried to take advantage of

²⁶ Serjeant 2000: 68, quoting Ibn al-Dayba’. See below. This episode does not figure in Ma Huan’s book, which indicates only that the king had a “powerful and threatening army.”

the damage caused to the positions of the *kārimī* merchants in Egypt (see above). Indians were visiting Yemen; in 1433, an Indian shipowner went to see the sultan to complain about the taxes levied on the merchants of Calicut by officials in Aden (Serjeant 1988a: 73).²⁷ Traders from Cambay, in particular, still came to acquire madder. The chronicles mention offerings presented by the sultan of Cambay (in 1424), containing mainly textiles. In 1431, “the Treasury of Aden brought to the Court” still amounted to 500,000 dinars, which, however, was half of the amount for 1414 (Vallet 2010b: 664).

While the political power was crumbling, some great merchants managed to occupy positions at the heart of the state, but the position of their class at that time was precarious (Vallet 2006: 85). In addition, in 1435 and again in 1442, a plague epidemic – which also affected the Horn of Africa – struck Aden and the whole country. The period 1439–1454 saw a disintegration of the state, leading to a reaction from those sections of the population involved in long-distance trade networks. In 1454, the two sons of a sheikh from an eastern region of the sultanate, ‘Alī and ‘Amir ibn Ṭāhir, who were active in the madder trade, took Aden, and then ‘Amir seized the city of Zabīd and asserted his power over the whole country, founding the Ṭāhirid dynasty.

Under the Ṭāhirids, Aden experienced new prosperity. Aden’s revenues financed the army and the tribute paid to the northern tribes (Porter 2002: 183). The city also maintained a fleet that allowed it to defend itself against attacks from the sea: several attacks from al-Shihr and other neighboring powers were repelled between 1450 and 1490 (Subrahmanyam 1995: 758). Writing around 1500, Bā Makhrama stresses the cosmopolitanism of Aden: “Most of its inhabitants are a mix of people from Alexandria, Cairo, and the countryside (from South Arabia), Africans (?), Persians, Hadramis, people from Mogadishu, Jibālīs (?), people from Dubhān (Hujariyyah), Zayla’is, Barābir (Somalis), and Abyssinians; they are assimilated and have become rich and prosperous.” The author adds that many people came from Abyssinia and Somalia.²⁸ He also mentions Syrians and North Africans (Serjeant 1988a: 68). Slightly later, Pires emphasizes Aden’s role as an entrepôt, “one of the four great trading cities in the world”; he mentions copper, silver, gold coins, glass of all kinds and all colors, carpets, rose water, and opium as exported from Egypt to India and transiting via Aden (Pires, ed. Cortesão 1944, 1: 13–14, 16ff.). From Cambay, the merchants brought back fabrics, glass or stone beads, and products from Malacca. From Goa and Calicut came sugar, rice, and merchandise from China. Relations were maintained with the Bahmani sultanate, whose influence can be noted in Ṭāhirid religious architecture (Vallet 2006: 556). The Portuguese failed to conquer Aden, and the city, while not manifesting the same hold over the networks or the same powerful

²⁷ Thus the disputes were not only between the sultans and the *kārimī* merchants as S. Subrahmanyam claims (1993: 14). Subrahmanyam (1995: 758) has misinterpreted these events in considering that the source of conflict between Rasūlids and *kārimī* was the involvement of the sultan’s fleet in trade and its resulting competition with the *kārimī* merchants. In fact, persecutions of merchants only occurred over a shorter period of time.

²⁸ At the end of the fifteenth century, the consumption of coffee in Yemen spread beyond the Sufi circles of the Shādhiliyya and became more widespread. This change was marked by the appearance of small ceramic bowls produced in the Ḥays region, south of Zabīd, that were imitations of imported Chinese bowls (Keall 2001).

aura as during its Rasūlid past, continued to play a role as a hub between India and the Red Sea. The sultans were directly involved in trade: they owned vessels, and posted agents in the ocean's various ports (Porter 2002: 184).

South of Arabia, the island of Socotra, "mainly inhabited by Nestorian Christians," remained a place of transit between India and the Red Sea (Conti 2004: 107).

Issues of money, however, were limited under the Ṭāhirids, and Yemen experienced both internal and external difficulties at the beginning of the sixteenth century. The Ṭāhirid ruler al-Zafir 'Amir II (1489–1517) started to plunder the property of religious foundations, thus alienating men of religion. Following a Portuguese raid on the Red Sea in 1514, the Egyptian retaliation, supported by the Ottomans, led to the invasion of Yemen and the capture of its capital, Zabīd, by an Egyptian army, which however failed to take Aden. Yemen was finally incorporated into the Ottoman Empire in 1538.

During the whole of the fifteenth century, aside from the political changes that were occurring, Arab, Yemeni, and Omani merchants remained active in the Indian Ocean networks, in India, Southeast Asia, and East Africa. This latter region followed the patterns and transformations of the world-system during the fifteenth and early sixteenth century: the coast saw the rise of Islam, an increase in significance of the Gujarati merchants, and the development of the Swahili city-state culture. These processes were accompanied by the growing integration of the peripheries of the Swahili coast into the world-system.

19 East Africa and the Comoros

The city [of Kilwa] is large and is of good buildings of stone and mortar with terraces, and the houses have much wood works. The city comes down to the shore, and is entirely surrounded by a wall and towers, within which there may be 12,000 inhabitants. The country all round is very luxuriant with many trees and gardens of all sorts of vegetables, citrons, lemons, and the best sweet oranges that were ever seen, sugar canes, figs, pomegranates, and a great abundance of flocks, especially sheep, which have fat in the tail, which is almost the size of the body, and very savoury. The streets of the city are very narrow, as the houses are very high, of three and four stories, and one can run along the tops of them upon the terraces, as the houses are very close together. And in the port, there were many ships.
(Correia, in Freeman-Grenville 1962a: 66)

The Decline of Kilwa and Great Zimbabwe; the Rise of Mombasa and Mogadishu

The phase of recession of the Swahili coast during the fourteenth century lasted less than sixty years. The revival of the Indian Ocean trade at the end of the fourteenth century was felt in East Africa, the Comoros, and Madagascar.

This economic revival allowed Kilwa to rebuild the Great Mosque during Sultan Muḥammad ibn Sulaymān's reign (1421–1442). This was not done on the sultan's initiative, but thanks to the generosity of a rich merchant.¹ Smaller mosques were also constructed, as well as various buildings (the “House of the Mosque,” the “palace” of Makatuni, the “palace” of Songo Mnara, located on an island south of Kilwa, and others).² These buildings were characterized by domes and vaults decorated with Islamic and Chinese bowls inserted into the walls and ceilings, as was the case in the mihrab of the Great Mosque. While some authors have compared the vaults of this building to the Great Mosque at Gulbargā in India, associated with the Bahmanid dynasty and finished in 1367, Garlake has noted differences in the architectural design. However, Garlake has also pointed out that “the simple, pointed, ogival or nicked arches, the flat-faced false or corbelled pendentive, and the method of transition

¹ The sultan is said to have given 1,000 mithqals to the merchant for this reconstruction, but the merchant allegedly gave the money back, after having himself financed the reconstruction of the building (Horton and Middleton 2000: 93; Fleisher 2004b: 115). Note that the previous sultan, al-Malik al-Manṣūr, had accomplished the pilgrimage to Mecca in 1411 (Vallet 2006: 555, after al-Fāsi).

² Garlake 1966: 30, 36, 136, 192ff.; Chittick 1974, 1: 132, 135, 241; Sutton 1998: 138ff.

between octagon and circular dome seat achieved by the varying projection of multiple stonework cornices (the latter so characteristic of Kilwa's domed buildings), are all characteristic of India" (Garlake 1966: 115). A piece of marble on a tomb at Kilwa may have come from a Hindu temple in Gujarat (Sutton 1998: 146).

Stone architecture developed along the entire coast, with carved coral being used for elaborate decorations, especially the pointed arch doors of houses and mosques, characteristic of the central region (Malindi, Tanga, Pemba). Kirkman has noted that no strict parallels could be found abroad; however, he has suggested an Indian origin for this type of arch (1970: 250). Carved bosses and bowls decorated the panels of door arches and mihrabs. The motifs on the bosses, showing interlacing decoration and crosses, are well known in Ayyūbid and Ilkhānid art. Moldings surrounding doors or mihrabs often feature corded or "herringbone" motifs. Imported bowls and plates also decorated the tomb walls. The two major elements underpinning the power of the stone towns (long-distance trade and Islam) were here visually associated. The ostentatious use of these prestige goods was part of the process of competition and pursuit of wealth in Swahili cities: wealth was indicative of the power acquired by a group or an individual. Porcelain items in mosques and tombs were also meant as gifts to attract divine favors, in the same manner as the clothes placed inside the tombs. This use of porcelain items also had the effect of removing these goods from circulation, thus leading to constantly renewed demand. Another feature of the Kenyan coast was the appearance during the fifteenth century of tombs, each with a high pillar erected along the eastern wall of a paneled enclosure, sometimes decorated with porcelain bowls and plates. This innovation may have resulted from a synthesis between traditions from the northern Swahili coast and Egyptian influences, clearly visible on a tomb at Kunduchi (dated to the sixteenth or seventeenth century; see Illustration XLVII). These various architectural elements can be observed in both the Comoros and Madagascar, indicating the continuity of the trade networks.

Chinese economic influence grew at this time. Ships from the Chinese fleets led by admiral Zheng He sailed to the East African coast during the fifth expedition (1413–1415), when a part of the fleet, from the Maldives, reached Malindi, and later during the sixth expedition (1421–1422). Kilwa imported twice as much from eastern Asia as from the Arabo-Persian world, including small blue-and-white porcelain bowls as well as Longquan celadon plates and bowls. They were decorated with Buddhist symbols and floral themes inside, and their exteriors showed lotus tendrils and other floral motifs. These imports increased even more during the late fifteenth century, when "merchants from Jiangnan began to invest heavily in the production and commercialization of Jingdezhen blue-and-white porcelains" (Zhao 2015b). Vietnamese blue-and-white ware and green-glazed stoneware from Thailand were also imported. "From the 1470s, these ceramics were replaced by green-glazed stoneware and opaque white-glazed earthenware from the Twante and Bago regions in Burma" (Zhao 2015b). Southeast Asian ceramics, however, have only been identified at a few sites, such as Gedi, Manda, Kilwa Kisiwani, and Songo Mnara (Zhao 2015). Chinese shards sometimes have rivet holes bored into them to accommodate metal wires joining up broken pieces, and some Chinese and Islamic shards were perforated in order to be worn as adornments of the body and clothing: Zhao (2015b) correctly points out that these

practices attest to the value of these imported ceramics, and show that they “became integrated into the local material way of life in highly variable forms . . . According to Gilbert Pwiti [2005: 386], Swahili merchant families considered Chinese ceramics as a form of capital whose value was guaranteed.”

Islamic pottery primarily consisted of monochrome ceramics with green or blue glaze. According to Horton, these monochrome ceramics probably came from the Red Sea and South Arabia. Various sites have yielded polychrome pottery that has been compared to ceramics from Qusayr al-Qadim and Fustāt (Horton 1996). Moreover, during the fifteenth century, there was a significant revival in trade with the Persian Gulf, marked by the importation of Islamic blue-and-white work showing floral motifs, and lead-glazed plates. Chittick has suggested a Persian origin for the bowls showing floral motifs with blue designs outlined in black and a turquoise glaze which decorated the ceilings of the “House of the Mosque” at Kilwa.³

Most of the Chinese ceramics, however, were imported by Indian merchants. The fifteenth century saw a decline in Islamic trade from western Asia on the East African coast and its replacement by Indian trade (Pearson 1998: 48, 101–104). Malindi, Mombasa, Kilwa, and Pate were home to Gujarati communities. The Portuguese made much of the presence of Indian ships in the main ports of East Africa when they arrived on the coast. The Indians brought glass beads and vessels and ceramics, as well as silk, cotton cloth, and agricultural products. In the early sixteenth century, the Portuguese Tomé Pires mentions “rice, wheat, soap, indigo, butter, oils and cloth”⁴ as imported by ships from Aden and Cambay; as with other regions of the Indian Ocean, long-distance trade was not limited to luxury goods, as suggested by Wallerstein and other authors. Pires also mentions the export of significant amounts of opium from Aden and Cambay.⁵ Kilwa was the ultimate destination of the large ships sailing southward. In 1491, in a letter addressed to the king, the Portuguese traveler Pero de Covilhã states that the passage around the tip of Africa was known in India.⁶ Textiles formed the majority of Indian imports. In 1505, Almeida writes: “In Mombasa, [one finds] quantities of cotton cloth from Cambay, because all this coast dresses in these cloths and has no others” (Pearson 1998: 122).⁷ In 1504, Mombasa was home to an Indian community, in particular Bohra Ismailis. At the time the Portuguese arrived, the city of Mombasa had bombard cannons that had probably originated in Gujarat. The presence of domesticated elephants in the same city clearly indicates South Asian influences.⁸ The Indians acquired gold and ivory, providing supplies for a prosperous craftsmanship sector in Gujarat (most of the ivory

³ Chittick 1974, I: 135, II: 308. This pottery, probably dating to the second quarter of the fifteenth century, may have come from southern Iran (Whitehouse 2001: 421).

⁴ Horton 1996: 417–418. These products, writes Pires (ed. Cortesão 1944, I: 43), were brought “to Zeila, Berbera, Socotra, Kilwa, Malindi, and Mogadishu.”

⁵ Arab merchants brought opium into Ethiopia. Opium from Aden, coming from Egypt and Arabia, went to Gujarat and Malacca. The region of Cambay also produced and exported opium (Pires, ed. Cortesão 1944, I: 8–9, 13, 16–17, 43, 93, II: 269–270).

⁶ Covilhã “gave it as a definite fact that it was easy to navigate from the seas of Guinea to the coast of Sofala and the great Island of the Moon [Madagascar]” (Axelson 1940: 28).

⁷ Ports such as Malindi received rice from Gujarat, which shows that trade was not just in luxury goods.

⁸ Account of the journey of Francisco de Almeida by Hans Mayr (Newitt 2002: 12, 15). The Portuguese also found cannons and muskets on the Querimba Islands in 1523 (letter from P. de Castro, in Newitt 2002: 49).

exported from the East African coast was destined for India). Testimonies dating to the early sixteenth century seem to indicate that ivory was more abundant along the southern part of the Kenyan coast. “In 1518, Antonio da Silveira told his king that ivory could be sent from Sofala to Malindi and make a good profit: it would sell for 140 cruzados the *bahar* (nearly 300 kg). Its cost in the south would have been perhaps 40 cruzados” (Pearson 1998: 84).⁹

The importation of Malagasy chlorite schist into East Africa stopped during the fifteenth century. This may have been linked to the increasing importation of Chinese ceramics which probably fulfilled the same role of prestige goods as the chlorite-schist vessels.¹⁰ It is also possible that internal problems on the northeastern Malagasy coast put a stop to its chlorite-schist exports.

Local ceramics still formed the vast majority of the finds at Kilwa in the levels dated to the fifteenth century, with a painted red pottery, and a “striped” pottery. Some of the painted pottery bowls show the use of graphite in decoration. The abundance of bowls, at Kilwa as well as the Kenyan coast, indicates social evolution: food was probably no longer served on large communal plates but individually, at least in the wealthier sections of society. It may also mark the significance of festive meals characteristic of systems of rank.

During the fifteenth century, political and economic changes occurred on the East African coast, due both to the partial restructuring of exchange networks and to external influences. In the Lamu archipelago, Ibadis related to the Nabahani dynasty of Oman settled in Pate, around 1406, according to Allen, and during the late fifteenth century, according to Horton and Middleton.¹¹ In Allen’s version, Ibadism spread within the merchant class, contrasting with the Shirazi type of hierarchical system; it provided an ideological support for the new merchant elites, who progressively imposed “Arab-*wangwana* regimes” within the northern Swahili cities.¹² Other researchers instead have pointed out the impact of an orthodox Sunni Islam and the links developed with Hadramawt, western Arabia, and Egypt on the main

⁹ According to Alexandre Lobato, in 1530, “the best quality ivory cost 30 to 40 maticals in Sofala, and would sell for 120 in Malindi, or could be exchanged for cloth or other goods worth 160 maticals” (Pearson 1998: 84). A captain at Kilwa writes at the beginning of the sixteenth century: “a great quantity of ivory is to be had between Sofala and Kilwa which is valued at 15 maticals of gold the quintal, and that in due time it will be worth 80 and 100 maticals the quintal in Cambay” (1998: 86).

¹⁰ Chinese ceramics must have served this purpose from the ninth century, when they first appeared on the East African coast.

¹¹ Horton and Middleton 2000: 161. For these authors, who contradict Allen, there is no trace of Ibadism at Pate at this time, which means that the Ibadis from Oman must have been assimilated as Sunnis of the Shāfi‘i school. It is difficult to date the arrival of the Nabahani in Pate; moreover, according to Pouwels, these Nabahani may in fact have originated in Hadramawt (Pouwels 1987: 40; Vernet 2005: 357). Apart from external influences, Vernet (2005: 551) sees the “emergence, or the exacerbation, of the *uungwana* as a means of domination” as the result of an internal dynamic marked by “a fear of the elites faced with the influx of new city-dwellers.”

¹² Allen 1993: 202–208; Sinclair and Hakansson 2000: 469–470. Malindi, however, kept an organization of the Shirazi type until the sixteenth century (Allen 1993: 207). At the mouth of the Tana River, where excavations at Ungwana have revealed the existence of a large building in the center of the settlement, the cities seem to have been Shirazi. Moreover, there was a Shirazi confederation during the sixteenth century, bringing together Manda, Luziwa, Lamu, and Kitau (Pouwels 1987: 32, 49; Vernet 2005: 49–50, 512).

developments observed (Pouwels 1987: 37, 40). At the time of the Portuguese arrival, the sultan from Osha (Ungwana) claimed to be “the vassal of the sultan of Cairo,” probably because Egypt controlled the Hijāz at the beginning of the sixteenth century (Vernet 2005: 65). Later data from the following centuries – we do not know, however, whether they reflect earlier situations or not – show city-states governed through alliances between hierarchized kinship groups, with hierarchy based on seniority and prestige (Sinclair and Hakansson 2000: 470).

The restructuring of the networks mainly occurred during the second half of the fifteenth century. The absence of new buildings at Kilwa at the time reveals a relative stagnation, due to internal conflicts, the decline in the gold trade, and increased competition between coastal city-states. The northern cities – Mombasa, Malindi, Pate, Barawa, and Mogadishu – then took the upper hand. Horton has suggested that the abandonment of Shanga around 1425 was due to an attack by Pate (the Friday mosque at Shanga was burnt down), but this remains uncertain.¹³ We cannot place too much reliance on the *History of Pate*, a Swahili chronicle which describes the later victorious march of troops from Pate as far as Mogadishu in the north and Kilwa in the south: this chronicle probably presents a romanticized version of the advance of the *waungwana* system, at the expense of the Shirazi model.¹⁴ At Kilwa, for the first time, a rich merchant who did not belong to the ruling dynasty governed the city for a while in the middle of the fifteenth century, and the sultan whom the Portuguese later met enjoyed only limited authority (Fleisher 2004b: 115). Moreover, conflicts with the hinterland seem to have escalated at this time (Fleisher 2004b: 117).

Kilwa had partly lost control of the gold trade by the end of the fifteenth century. Sofala, now independent from Kilwa, was in direct contact with Mombasa and other northern cities. Pedro Alvares Cabral thus describes his encounter with “a gold trader headed to Malindi who had no intention of calling at Kilwa” (Fleisher 2004b: 103). In addition, the town of Sofala itself was in decline. A decrease in the gold trade accompanied the decline of the state of Great Zimbabwe, perhaps due in part to climate changes. Great Zimbabwe enjoyed a period of prosperity during the early fifteenth century, along with Kilwa.¹⁵ At that time, Great Zimbabwe controlled an “empire extending from the Zambezi valley in the north to the Limpopo in the south, and as far as the coast, but later, at the end of the century, the town of Zimbabwe was practically abandoned, perhaps for ecological reasons of demographic growth, overgrazing and a period of harsh drought that prevented navigation on the Save River and ruined Sofala’s export business.¹⁶ The decline in agriculture and livestock breeding

¹³ “The survival of a strong ‘Shirazi’ component at Shanga may have precipitated an attack by Pate [while] Pate was emerging as the principal center of *wa-ungwana* power on the northern coast” (Horton 1996: 427). At Manda, a city where the older Shirazi system survived, the mosque was destroyed during the same period. The abandonment of Shanga may also have been linked to problems with drinking water supplies (Vernet 2005: 47).

¹⁴ As to the emergence of Pate after the arrival of the Portuguese, see Vernet 2005. The demise of the Ozi Shirazi confederation (mouth of the Tana River) before a coalition of Pate and Oromo warriors did not occur until the seventeenth century. See also Pouwels 2002: 406–407.

¹⁵ T. N. Huffman (1996) also mentions a more favorable climatic situation from 1420 onward.

¹⁶ The abandonment of some sites in Uganda also corresponds to an ecological crisis in this region from the middle of the second millennium (Chrétien 2000: 88).

certainly weakened the role of the rulers as mediators – they were considered as “rain makers” (Pikirayi 2001: 155) – and instead promoted competition between leaders: damaged by internal wars, the empire collapsed during the late fifteenth century. The capital of the king, the *mwene mutapwa*, shifted to the north, while the south seceded. The two regions remained connected to long-distance trade, as evidenced by discoveries of beads and shards of Chinese pottery (celadon and blue-and-white porcelain), for example at Khami. New political and economic centers emerged, such as Khami, the capital of Butua, which was located at the heart of a gold-producing region. Further north, the Zambezi valley served as a major trade route at this time. The significance of this route is clear from the discovery of sites such as Chedzurgwe (northwestern Zimbabwe), where copper- and ironworking was practiced, as well as livestock breeding, and from the rich burial sites of Ingombe Ilede (southern Zambia), which have yielded cruciform copper ingots (of the HXR type, mostly produced at the Congo–Zambia border), gold, glass beads, necklaces made from seashells, textiles perhaps imported from India, and fine pottery similar to that of the Urungwe district.¹⁷ Ingombe Ilede benefited from the salt deposits of the Lusitu River valley and probably exchanged this salt for gold and copper. In addition, this settlement participated in the ivory trade with the coast, as shown by the elephant bones found in all the layers (Insoll 2003: 371).

The beads from that period belong to the “Khami-Indo-Pacific series.” These are different from the Zimbabwe series; they are made of mineral-soda glass and also found in large numbers on the East African coast, dating from as early as the beginning of the fifteenth century. They certainly came from India: in the sixteenth century, the Portuguese mentioned imports from Cambay (Gujarat) and Nāgapattinam (Coromandel coast) (Wood 2011: 77).¹⁸

The existence of market towns favored encounters between producers and traders.¹⁹ “The unique currency that is used is gold by weight.”²⁰ The coastal people cultivated cotton and had developed a cotton weaving industry, but “did not know how to dye it or had not the needful dyes. [In Sofala] they take the Cambaya cloths, blue or otherwise colored, and unravel them and make them up again, so that it becomes a new thing. With this thread and their own white they make much colored cloth, and from it they [the Moors] gain much gold” (Barbosa 1989, 1: 9). Trade with the interior

¹⁷ Fagan 1985: 593; Horton and Middleton 2000: 102; Bisson 2000; Swan 2007a; de Luna 2016: 209–211.

These copper cruciform ingots were prestige goods and served as currency (see above). Mbarra from northwestern Zimbabwe traded copper to the coast via the Zambezi valley. The conquest of the copper mines of the Urungwe region by the Mutapa state impacted the trade and control exerted by Ingombe Ilede (Pikirayi 2001).

¹⁸ They are chemically distinct from the K2-IP and East Coast-IP series: they show higher levels of Na₂O₃, MgO, CaO, and U₃O₈ (Wood 2011: 77).

¹⁹ According to a Portuguese account from 1513, gold was carried to “fairs” attended by Moors from Sofala (Pearson 1998: 88). A. de Saldanha mentions a market at Utonga, in the Zambezi valley (*DPMAC*, 111: 15). Routes linked the Zambezi and the coast of Angoche (Alpers 1975: 45). Pearson rightly observes that men – not women – had the upper hand over long-distance trade, and over gold and ivory “production.”

²⁰ Veloso (1512), referring to the lands of Inhacoe (Zambezi), quoted by Randles 1975: 124. Santos (1609) would later mention “copper cruciform ingots, tin ingots, glass beads and cloths [as means of exchange]. Pedro Barreto de Rezende (1635) adds iron hoes to this list” (Randles 1975: 125).

was conducted by Swahili, Sena from the Zambezi valley, or Shona from the state of Mutapa who had converted to Islam (Beach 1994: 105). Various Portuguese documents emphasize the huge profits the foreign and Swahili merchants could make. According to Barbosa, the Swahili made a one hundredfold profit, as the “Heathen of the Kingdom of Benametapa came thither laden with gold that they gave in exchange for cloths without weighing it” (1989, 1: 8) (this assertion is questionable).²¹ Barbosa also writes that “The Moors . . . from Melinde and Mombasa purchased [cotton cloth, silk and grey, red and yellow beads from Cambay] from other [merchants] who bring them hither and they paid for them in gold at such a price that those merchants departed well pleased, which gold they gave by weight” (Newitt 2002: 32–33). According to a text from 1525, “a quantity of small yellow and blue beads that cost 1.05 maticals in Cambay would sell for 21.28 maticals in Sofala. In the same markets, cloth sold for five times its cost price” (Axelson 1973: 102; Pearson 1998: 113). João de Castro writes to the king in 1545 that in Delagoa Bay “for a few beads worth 3 vintems [equivalent to 60 reis], one could buy a bahar of ivory that would sell for more than 100 cruzados in India [40,000 reis].”²² Moreover, as previously noted, the Portuguese mention substantial differences in exchange rates for goods between Sofala and Malindi, differences that could not entirely be attributed to transport costs. In 1530, textiles “bought for 100 in Gujarat sold for 220 in Malindi and 780 in Sofala” (Pearson 1998: 113).

Some authors have mentioned a possible “deindustrialization” at Kilwa and along the Swahili coast during the fifteenth century, due to massive imports of Indian textiles;²³ however, the Indian imports sometimes also served as a stimulus to East African production (Clarence-Smith 2005). The Swahili towns produced their own textiles, which were traded with the hinterland. At Songo Mnara, the production of cloth occurred “inside the houses, positioning those structures as crucial nodes in the economy of trade” (Fleisher *et al.* 2015). In any event, cotton fabrics – mass-produced in Gujarat and on the Coromandel coast – were the main product imported into East Africa, well ahead of glass beads and silks.²⁴ The rise of the Gujarati textile industry allowed Cambay to capture most of the gold from Zimbabwe. These textiles arrived

²¹ Barbosa also writes: “[The merchants from Benametapa] carry the inland gold to Sofala and give it unweighed to the Moors for colored cloths and beads, which are greatly esteemed among them; which beads come from Cambay” (1989, 1: 12; Newitt 2002: 34).

²² A. Bocarro, “Livro das plantas das fortalezas da India,” in Bragança Pereira, IV, ii, 227, quoted by Pearson 1998: 113. In rare cases, Indian beads may have reached Natal (South Africa), as shown by the recent discovery of a cache of 5,000 beads at Sibudu; these beads can be compared to those found at Ingombe Ilede or Thulamela (Wood *et al.* 2009: 251).

²³ See Pearson 1998: 123, 126. Moreover, A. Fernandes (between 1511 and 1514) and Monclaro (1569), writing about the state of Mutapa, and Barbosa (1515), referring to Sofala, would later mention the existence of a local textile industry; this was indeed a time when the Swahili were developing textile production, in reaction against the Portuguese stranglehold on trade (Randles 1975: 125).

²⁴ Barros (1552) signals that the nobles wore silks embroidered with gold, imported from India (Randles 1975: 119). However, he notes that the Mutapa ruler “wore only indigenous materials, ‘through fear that any coming from the hands of strangers might be infected with some evil quality to do him harm’” (Pearson 1998: 124). There were certainly other reasons for the king’s choice, since his wives and the nobles wore silk and other imported materials.

in the main ports and were redistributed to secondary ports: “[The Moors] all trade with one another,” writes the factor of Sofala P. Vaz Soares in 1513, “and thus fill the land with cloth” (Newitt 2002: 44). While M. N. Pearson, who studies the period after the fifteenth century, acknowledges that Swahili and foreign merchants made “massive profits,” he argues that this does not necessarily indicate exploitation (1998: 117). That may have been true in some places (see below), but, as already pointed out, Pearson downplays the mechanisms of exploitation, and largely underestimates the impact of long-distance trade with the interior as well as the dimensions of the trade in terms of volume, time, and space.²⁵ According to this author, the elites of the Mutapa state played only a minor role in trade and were primarily interested in cattle, land, and women; ivory was a mere “by-product” of elephant hunting (for meat), and gold had no intrinsic value. However, Pearson makes two points that contradict his own views. In some regions, for each elephant killed, one tusk was reserved for the king,²⁶ and gold production was sometimes taxed at a rate of 50 percent.²⁷ If “the state interfered little” in production or trade, and “did not derive much revenue from trade” (Pearson 1998: 120, and 104), one might well ask why those elites took steps to impose such heavy taxes precisely on ivory and gold. The transport of heavy loads of ivory over long distances also shows the interest of the different stakeholders involved in the trade.²⁸ As early as the tenth century, Mas’udi notes that “the Zanj rush upon [elephants] armed with very long spears, and kill them for their ivory. It is from this country [Sofala and the Waqwaq] that come tusks weighing 50 pounds and more. They usually go to Oman and from there are sent to China and India . . . The Zanj, although always busied hunting the elephant and collecting its ivory, make no use of it for domestic purposes” (Freeman-Grenville 1962a: 14–16). The quantities of ivory exported also contradict the idea of its collection being merely a discretionary activity.²⁹

Pearson indicates in passing that some (rather small) quantities of fine textiles were traded with elites from the hinterland, but he writes practically nothing about the processes of social stratification triggered by long-distance trade. Moreover, according to Pearson, the Swahili merchants had to push the natives from the interior to buy fabrics.³⁰ According to Pearson’s vision, the African interior was

²⁵ The “marginal” character of gold production in the Mutapa state, suggested by Pearson, is certainly not valid for the period 1250/1300–1350, which corresponds to the apotheosis of the state of Great Zimbabwe.

²⁶ Pearson 1998: 87, 104, 120. Attested at various times (see Alpers 1975: 18, 28, for the Yao and the Maravi country during the seventeenth and nineteenth centuries), this practice was probably ancient. The idea that the chief must be offered a share of the game is widespread in sub-Saharan Africa.

²⁷ Pearson 1998: 104. On this point, the testimonies appear to be contradictory; this might reflect different situations, depending on the states or chiefdoms, and also changes according to the times (see below).

²⁸ On the other side of the continent, it is interesting to note that north of the Congo River, in the Loango kingdom, the export of ivory was a prerogative of the aristocracy, even prior to the arrival of the Europeans (Ekholm 1972: 125).

²⁹ R. Palat, while repeating Pearson’s statements, mentions the export of 121 tons of ivory from Mozambique and Sofala in 1546 (2015: 158).

³⁰ Such a situation probably only prevailed during periods of massive imports of cotton materials. Moreover, it seems difficult to believe that “traders from the coast had to try and create a market *de novo*” during the fifteenth or sixteenth century (Pearson 1998: 113): trade between the coast and the interior had existed for centuries. If it was so hard for the traders to sell their products, how could they derive “huge profits” from

practically a “non-commercial” world. Set against this assertion, Pearson himself points out “the high use value of the imports,” which contrasts with the absence of use value of primary products exported from the coast.³¹ Swahili and foreigners alike, therefore, made huge profits, but there was no exploitation. “Overall, the advantage lay with Africa” (Pearson 1998: 117). The Africans, relying on agriculture and living by hunting, worked at their convenience to extract gold and acquire superfluous products (except for cloth “on the plateau”) and traders had to struggle to try to create a market for their fabrics.³² For Pearson, it seems that people only wear clothes to keep warm (Pearson 1998: 104, 117, 123), and textiles are unrelated to social status, about which, in fact, he says almost nothing³³ (see, however, Pearson 1998: 124). “From the African point of view,” trade had only “benign effects.”³⁴ “Differing use values and the autonomy of the African hunter or peasant faced with mercantile capitalism meant that the notion of exploitation or any more general detrimental impact is hard to sustain.”

By contrast, describing “the structural subordination of African economies to a capitalist economy” during the modern period, Alpers states: “If Africans wished to continue to receive goods from abroad, they necessarily had to provide those goods that were required” (Alpers 1975: 265). Generally speaking, “imported luxury goods,” writes Polanyi (1975), “were essential for the elites who acquired them, and they largely determined their policy.” D. Killick (2009) notes that trade was a necessity for the rulers of Mapungubwe and Great Zimbabwe. The Portuguese captain António da Silveira writes in 1518 that “without imported goods, the [Mutapa ruler] would not have been able to raise an army” (Randles 1975: 45). Writing of the Homem expedition in 1569, Diogo do Couto (late sixteenth–early seventeenth century) and João dos Santos (seventeenth century) also noted the importance of trade for the Karanga chiefdoms.³⁵

their trade? Pearson, however, also writes that it was possible to secure even greater profits in virgin markets than in existing ones. In addition, as he himself points out, “cloths were often used as currency inland from the Swahili coast” (1998: 147).

³¹ Pearson 1998: 105. The idea – often put forward – that gold had no symbolic value must be qualified. Gold has been found in tombs at Mapungubwe (thirteenth century) (Limpopo), and at sites belonging to the Great Zimbabwe culture (see below). Moreover, “Monclaro contradicts other sources by saying that the Cafres attach much more importance to gold than the Whites, in order to acquire cotton clothes” (Magalhães-Godinho 1969: 252 n. 3).

³² “Muslim merchants or their agents often had to press cloths onto the locals, and trust that they would produce gold or ivory in return” (Pearson 1998: 104).

³³ The Shona ruler of the Mutapa state redistributed part of the merchandise he had acquired. Barros notes a levy raised by the ruler on the merchandise traded in fairs: this levy took the appearance of a voluntary “offering” from the merchants to the king (Freeman-Grenville 1962a: 95–96; Magalhães-Godinho 1969: 251).

³⁴ Pearson 1998: 119. He adds (1998: 127) that both sides (Africans and “people of the sea”) benefited from the trade.

³⁵ Newitt 2002: 72, 86. As for the kingdom of Kongo during the sixteenth century, J. Friedman (1994: 9) points out that its elite benefited at first from contact with the Portuguese, but was later short-circuited by foreign merchants, who traded directly with local chiefs; this process led to the collapse of the Kongo kingdom (Ekholm 1972: 101–102; see above).

Pearson (1998) has downplayed the size of gold production prior to the end of the fifteenth century³⁶ as well as ivory exports,³⁷ and has neglected the role of long-distance trade in the creation of stratified societies such as those in the Limpopo valley or in Great Zimbabwe.³⁸ While Pearson paints a picture of an amateur gold rush in Africa, Al-Sirāfi's work – which has previously been known under the title *The Book of the Wonders of India* – describes African miners in the tenth century “work(ing) like ants in the galleries.”³⁹ D. de Alcaçova (1506) mentions the digging and also the dangers of the gold mines. In 1511, the Portuguese traveler A. Fernandes recounts that “in the Amçoçe chiefdom (located near Manica, this state was situated between the Save and Zambezi rivers), mining was the only resource of the inhabitants, who imported food from the outside.”⁴⁰ “A document from 1573 indicates that in the Manica kingdom, agricultural harvests were not sufficient to feed the inhabitants, who were busier trading than working in the fields; they bought all that they needed.”⁴¹ The ruler controlled gold exploitation. According to Fernandes, at the start of the sixteenth century, “the miners [of] the chiefdoms of Amçoçe and Mazofe (Mazoe) [Zimbabwe] paid [the sovereign] half the fruits of their labour.” “No man,” states Alcaçova in 1506, “could extract gold without the [Mutapa] king's permission.”⁴² The level of control, however, may have been subject to change, and the 50 percent taxes applied only at the opening of a mine and in regions near the power center (Beach 1994: 104). The nature of the labor employed for extracting gold in Zimbabwe remains unclear; it is not known whether some of it was forced labor, although Magalhães-Godinho, quoting Barreto and Monclaro, writes: “As soon as a *marondo* [seam] showed itself to be productive, the powerful ones would approach it with their men and slaves and take the gold by force,

³⁶ Curiously, however, Pearson (2003: 84) gives an estimate of 10 tons of gold per year exported from the Sofala coast during the fifteenth century (an estimate already suggested by Summers 1969: 195). In 1506, a “well-informed” Portuguese chronicler indicates that exports from the Sofala coast may have reached 6 tons in peacetime (Pearson 2003). Other authors have given lower estimates (Miller *et al.* 2000: 96). T. Lopes (1502) and D. de Alcaçova (1506) indicate exports of 8.5 tons and 7.65 tons of gold respectively (Randles 1975: 113).

³⁷ See Sinclair and Hakansson 2000: 473–474, who mention P. F. Thorbahn's work (1979) – also used by Pearson. This work, however, is difficult to use for early periods.

³⁸ Pearson (1998: 121) mentions the development of “self-sufficient communities” whose geographical location was not connected with the sites of gold exploitation. See, in contrast, Swan 1994. Trade with the coast provided new means of capital accumulation and stimulated mining activities. Expanding trade led to the creation of markets and the rise to power of elites controlling political and military entities (Miller *et al.* 2000: 96).

³⁹ Freeman-Grenville 1962a: 15. According to Abū l-Fidā' (1273–1331), “Ibn Sa'id [thirteenth century] says that the chief means of existence [of the inhabitants of the Sofala coast] are mining gold and iron” (Freeman-Grenville 1962a: 24). Mines were exploited by trenching and also by digging shafts which may in some cases have been 25 m deep. Abū l-Fidā' tells of iron metallurgy in the vicinity of Malindi, on a mountain called al-Kerany (Freeman-Grenville 1962a: 23). However, he was only a compiler (see Miquel 1967, I: 310).

⁴⁰ Randles 1975: 81, 122, after Veloso (1512). In contrast, Barros writes that the *monomotapa* earned nothing on the gold extracted, but the “Kaffirs” were obliged to perform corvée work, and presented gifts to the lords and the king.

⁴¹ Randles 1975: 81. In the Manica region, as Magalhães-Godinho also notes (1969: 249), mining activities may have continued throughout the year.

⁴² Randles 1975: 121. Dos Santos (book 11, ch. 8) reports that when someone found gold, “he had to shout it out,” to indicate that he had not taken any of it (Randles 1975: 122).

terrorizing the workers. The latter usually abandoned the seam and contented themselves with the small bits of metal that they had been able to hide from the covetous eyes of the lords” (1969: 251). According to other sources, when the sovereign of Mutapa wished to obtain gold, he had cattle distributed to his subjects “in proportion to the work they performed.”⁴³ Portuguese accounts record the presence of an exchange cycle that bolstered the dominance of the ruling classes: cattle were used to acquire gold, which in turn was used to procure luxury goods. These goods reinforced the power of the local elites, who were able to increase the size of their herds. For the previous kingdoms of Mapungubwe and even, in part, Great Zimbabwe, however, the elites made profits “by trade rather than by direct exploitation” (Coquery-Vidrovitch 1993: 78).⁴⁴

In any event, the chiefs played a role in the acquisition both of gold and ivory (Pikirayi 2001). Barros (1552) notes: “The Africans had as many as five thousand elephants killed annually.”⁴⁵ The quantities of ivory exported were so great that it could hardly, as Pearson suggests, be the mere “by-product” of elephant hunting.

The form of trade that provides the best evidence of exploitation and a chain of dependency is one which Pearson has largely chosen to ignore: the slave trade, a trade emblematic of the exploitation of the African interior. It is as if the *razzias* conducted by coastal groups to acquire slaves did not inflict any social damage on peripheral or marginal societies.⁴⁶ The slave trade is treated as negligible prior to the eighteenth century. Let us recall what Alpers has written about the modern period: “What the Africans received in exchange for slaves in no way equalled the labour power lost to each society . . . [In exchange for slaves, ivory and gold], the Africans received [only] inexpensive consumable goods” (Alpers 1975: 266). The low cost of these goods in the core was above all the result of gains in productivity and low wages. The slaves were in fact at the end of a chain of dominance. The effects of the slave trade were all the more devastating as women probably formed a large proportion of the slaves traded: we know that they played a crucial role in agriculture along the East African coast. This analysis of the inequalities of the slave trade is also valid for the ivory and gold trade.

⁴³ Randles 1975: 121, after Barros (1552) and Monclaro (1569).

⁴⁴ C. Coquery-Vidrovitch (1993: 71–72) also notes, with reference to the empires of West Africa founded on mineral resources, that “the problem for the ruler was not that of requiring a collective effort from his subjects to extract the ore; his aim was to acquire at the lowest cost a metal the deposits of which were sometimes located very far from his territory: neither the king of Ghana nor the emperor of Mali exerted direct control over the [gold] producers, who probably worked within a gathering economy.” Gold mining by households, however, “may also have been practiced with a limited servile labor force” (Coquery-Vidrovitch 1993: 78). The Jula served as intermediaries between the gold-producing regions and large states such as the Mali Empire.

⁴⁵ Randles 1975: 114. Newitt’s translation (2002: 38) says only: “It is generally reported among these Cafres that four or five thousand [elephants] die every year.” It would be useful – generally speaking – to go back to the original texts. Moreover, as has been pointed out, there are contradictions between certain accounts, which probably reflect not just inaccurate observations, but changing situations in terms of time and space.

⁴⁶ Pearson (1998: 116) notes only that slaves were crucial for plantations in Brazil at the end of the eighteenth century and that the demand for slaves was low, by contrast, in the African interior. Pearson says nothing about the transport of ivory, which was carried on foot to coastal ports.

It is true that there are not many testimonies about the slave trade carried on during the fifteenth and early sixteenth centuries from the ports on the East African coast. A Hadrami chronicle from the fifteenth century does, however, mention a tax of two dinars per capita levied in Aden on slaves imported from Mogadishu, and judicial texts from the sixteenth century mention a slave trade.⁴⁷ According to Portuguese documents, in 1506, “two ships belonging to residents from Kilwa were transporting 180 slaves each,” and a ship from Gujarat sailing from Malindi took slaves to Cambay in 1518. “The bulk of its load, however, comprised ivory and metals.”⁴⁸ In the *Sufāliya*, Ibn Mājid writes this about the “Monomotapa”: “Concerning Sofala, it is separated from the people of Muna-Musavi [Monomotapa], and the ruler of Zabnavi [or Zimbawī] [Zimbabwe], it is here that the gold mines are, and the slave trade – you are informed. The trip . . . lasts one month from Sofala to the West” (Jouannès 2001: 82). These slaves were exported by Kilwa and also employed on the island. Hans Mayr writes in 1505: “In this land, there are more negro slaves than white Moors, they work in the gardens, tilling the maize [sorghum?]” (see *DPMAC*, 1: 524; Newitt 2002: 13).

The economic domination of the cores could at times be thwarted by the control and management the African elites exercised over trade. Some coastal cities were thus able to negotiate more favorable commercial terms than others. As pointed out above, in Mogadishu, during the fourteenth century, households in the cities took care of foreign traders and at the same time limited their freedom to trade. Pero Afonso describes how, in Sofala, “the Portuguese brought everything before the king, who ordered the merchants of the country to come there, and they separated the goods, each kind by itself, and having counted it all, they weighed gold in small scales, and upon each kind of cloth they placed its price, in gold which each one was worth. Then the king said that those stuffs were worth the gold which was on top of them, and that they might take it, and he said that his dues were already accounted for in the weighing.” The king told Afonso that “he did much good to all that came to his country, especially to the merchants, because from them he received great profit” (Newitt 2002: 8–9). Before the Portuguese arrived, control over the Sofala gold trade by the sultan of Kilwa – and the island’s particular location (Fleisher 2004b: 97) – gave him a negotiating power not enjoyed by the other rulers of Swahili city-states. At the end of the fifteenth century, however, Sofala freed itself from Kilwa’s tutelage.

Some inland groups had the means to set better terms of exchange with the Swahili. Thus the elites of the kingdoms of Bambandyanalo (eleventh–thirteenth century), Mapungubwe in the Limpopo valley (thirteenth century) and especially Zimbabwe, the most powerful of these states (fourteenth–fifteenth century), which had mastered metalworking (copper, iron, and gold) and trade with the outside world, were probably able to benefit from their situation and resist exploitation. In the same region, the state of Manica required the Portuguese to pay an annual tribute, following the Fernandes Homem expedition in 1569, despite its military defeat. The textile “gifts” – in fact tributes – paid by Swahili cities to client groups that brought them products from the

⁴⁷ Serjeant 1963: 10, 34, quoted by Sheriff 2005: 20–21.

⁴⁸ Vernet 2005: 80, 189, letters from Pero Ferreira Fogaça to the king, Kilwa, August 31, 1506, and from Nuno Vaz Pereira to Fernão Cotrim, Kilwa, January 14, 1507, *DPMAC*, 1: 618, 11: 36; and letter from Diogo Lopes de Sequeira to the king, Cochín, December 23, 1518, *DPMAC*, v: 596–597.

interior and gave them military assistance have already been mentioned. Pouwels (1987: 14) notes that in the region of the Webi Shebele River, pastoral groups from the hinterland often had the upper hand, militarily, over their coastal allies.

The wealth of Kilwa – although in relative decline – struck the Portuguese, in the early sixteenth century. Barbosa describes the city as having

many fair houses of stone and mortar . . . , very well arranged in streets. The doors are of wood, well carved, with excellent joinery. Around it are streams and orchards, with many channels of sweet water. (Freeman-Grenville 1962a: 131)

Kilwa produced vegetables and fruit, and imported the livestock it needed from the interior; the city received fish from neighboring fishing villages. The same economic organization could be observed in other Swahili and Malagasy cities, with a complementarity of communities, each occupying a different ecological niche.⁴⁹ The economic and symbolic significance of the tree plantations (particularly the coconut groves) and gardens (*mashamba*) is noteworthy. “Symbols of prosperity and prestige, the *mashamba* were cut to the ground in case of defeat” (Vernet 2004: 392).⁵⁰

Trade was the source of Kilwa’s opulence. Each merchant was required to declare the nature and quantity of the merchandise he brought, and had to pay an import tax determined accordingly. Another tax was levied on gold and ivory bought, not only at Sofala, but also at Kilwa, where any merchant coming from the south had to stop. Kilwa also controlled the towns of “Çuama, Angoyo and Moçambique.”⁵¹ These taxes allowed the sultan to maintain both the city and his soldiers. The city no longer struck money, but it used coins from the previous period, as well as coins minted in Zanzibar and Mogadishu, copper coins according to Hans Mayr, who notes that gold was not used for coinage in Kilwa (Newitt 2002: 14). Cowries were also used for trade, either locally or with the outside world. As was the case in other regions of the Indian Ocean, money differed according to the type and quantity of transaction. Cowries were used for minor transactions.⁵² Gold from Kilwa was taken to Gujarat, and also to the southwestern coast of India. In 1503, Vasco da Gama returned to Lisbon with 1,200 mithqals of gold, which corresponded to Kilwa’s tribute, and 800 mithqals of gold from Cannanore and Cochin. When the Portuguese looted the city in 1506, they found there “quantities of distilled water and vials of good perfume, which [was] sent abroad, quantities of glass of all sorts, and many kinds of cotton cloth, large sacks of resin and gum, and a great amount of gold and silver, and seed-pearl” (Mayr, in Newitt 2002: 14).

⁴⁹ Links between communities occupying different ecological niches were already evident during the pre-Swahili period (Middleton 1992: 33). They have also been recorded in southern Madagascar (Androy and Anosy regions) (Rakotoarisoa 1998).

⁵⁰ The Portuguese borrowed this practice from the Swahili. As Vernet notes, the *mashamba* were “a source of social and political status” (2004: 392–393).

⁵¹ Barbosa 1967 [1516]: 18. D. de Alcaçova mentions huge taxes levied by the sultan of Kilwa, but the amounts suggested have little credibility (Magalhães-Godinho 1969: 255; Newitt 2002: 24–25).

⁵² Dos Santos, at the end of the sixteenth century, also signals the use of beads and fabrics as currency (Pearson 1998: 115). However, just as he underestimates the impact and significance of long-distance trade, Pearson also downplays the use of money on the coast.

Despite the decline of Sofala, Barbosa notes the presence of “Moors” in the city, who collected gold and ivory in exchange for goods coming from Kilwa, Malindi, and Mombasa. The Moors from Sofala and other coastal towns used to go to Mutapa and sojourn there. Moreover, some Muslims in the interior were Shona who had converted to Islam through their contacts with the Swahili.⁵³ As previously noted, in response to the Portuguese monopoly, Sofala developed the production of cotton cloth. This sometimes took a curious form: blue Cambay fabrics were unwoven, and later woven again by mixing local cotton and Indian blue thread; it seems that indigo for dyeing was not available (see above). Barbosa highlights the amount of textiles taken, for example, from Angoya (Angoche) to the hinterland, for exchange against gold and ivory.⁵⁴

Mombasa also surprised the Portuguese with its opulence, its stone houses arranged in well-aligned streets, and its cosmopolitan character. Barbosa describes it as

a place of great traffic, and has a good harbour, in which are always moored craft of many kinds and also great ships, both of those which come from Sofala and those which go thither, and others which come from the great kingdom of Cambaya and from Malindi; others which sail to the isles of Zanzibar, and yet others of which I shall speak anon. (Freeman-Grenville 1962a: 131–132)

According to D. de Alcaçova (1506), Mombasa surpassed Kilwa, “with its merchants and other people.” For Barros, “the king of Mombasa is the richest and the most powerful of the entire coast.” When the city was looted in 1505, “a large quantity of rich silk and gold embroidered clothes was seized, and carpets also; . . . one of these which was without equal for beauty was sent to the King of Portugal together with many other valuables.” The city was set on fire by the Portuguese, “many houses fell in this fire, and great wealth was burned, for it was from here that the trade with Sofala and Cambay was carried on by sea” (Mayr, in Newitt 2002: 15). The Portuguese took prisoner merchants from Cambay who were there, on three ships from Gujarat. As was the case in Kilwa, the ruler at Mombasa levied taxes on merchants traveling to and from Sofala: “any merchant who comes to Mombasa and brings 1,000 pieces of cloth pays to the king duties of entrance for each 1,000 pieces of cloth one *mitical* of gold. And then they divide the 1,000 pieces of cloth into two halves; and the king takes one half.”⁵⁵ Mombasa was an ally of Kilwa at the beginning of the sixteenth century: according to Correia, Mombasa’s ruler had married a daughter of the king of Kilwa. “Connections also existed between the ruling families of Mombasa and Zanzibar” (Vernet 2005: 61).

At Malindi, Mombasa’s rival city, merchants from Cambay also arrived each year, “Moors and Heathen,” “[in] many ships with cargoes of merchandise, from which they get great store of gold, ivory, and wax. In this traffic, the Cambaya merchants make

⁵³ The presence of Muslims in the Zambezi valley and the Rhodesian plateau has been emphasized by Diego de Alcaçova (1506), Barros (1552), Luis Frois (1561), and Monclaro (1569) (see Pearson 1998: 88–91).

⁵⁴ Freeman-Grenville, 1962a: 129–130. Veloso had already pointed out that cotton textiles were taken to the state of Mutapa to be sold (Newitt 2002: 28).

⁵⁵ Freeman-Grenville 1962a: 123–124, quoting Diego de Alcaçova. This levy appears exorbitant. M. Newitt (2002: 20) notes that Alcaçova’s information is not always reliable.

great profit.” The city of Malindi “has many fair stone and mortar houses of many stories, with great plenty of windows and flat roofs” (Freeman-Grenville 1962a: 132).⁵⁶

The significant site of Gedi, close to Malindi, may be the historical Malindi (Pradines p.c.). The remains of a large palace and six mosques have been excavated at this site.⁵⁷ The largest mosque, dated to the fourteenth century, is not located within the fifteenth-century enclosure, which may indicate a change in religious affiliation. This site has provided the largest number of Chinese coins found on the coast.

Barbosa also describes the fertility of the soil on Pemba and Zanzibar and the wealth of some of their inhabitants:

The kings of these isles live in great luxury; they are clad in very fine silk and cotton garments, which they purchase at Mombasa from the Cambaya merchants. The women of these Moors wear many jewels of fine Sofala gold, silver too in plenty, earrings, necklaces, bangles, and bracelets, and they go clad in good silk garments.⁵⁸

These women wearing silk and jewels and the families living in stone houses certainly belonged to the elites who dominated social, political, and economic life. Barbosa’s account reflects the main characteristic of the Swahili culture and, more particularly, of organizations of the Shirazi type,⁵⁹ in which style of dress,⁶⁰ the building and decoration of houses, and religious practices were expressions of social status (we should add another element: their way of speaking, something the Portuguese could not detect). Writing of the African interior during the sixteenth century, Barros also points out that “textiles sold by thalassians [coastal merchants] served first of all to signal to everyone the social rank of the persons who wore them. Commoners wore cloth manufactured locally, whereas nobles wore silk with gold embroidery imported from India. João dos Santos . . . notes that [in southeastern Africa] the king and the chiefs are dressed in cotton or silk materials, whereas the poor, almost all of them, go naked” (Randles 1975: 119). The patricians concentrated most of the power and access to assets in their hands, whether this was the right to deal with foreign merchants, to own livestock and land, or to perform religious functions.⁶¹

⁵⁶ Unfortunately, we do not know the precise origin of the ivory stored in Malindi or Mombasa: from the coast further south, or direct from the interior? (Sinclair and Hakansson 2000: 473). Barbosa, however, notes that Mombasa traded with people of the continent in order to acquire honey, wax, and ivory.

⁵⁷ Gedi appeared during the eleventh century. Following J. Kirkman (1954, 1960), who surveyed the northwestern part of the site, S. Pradines has recently carried out new excavations (1999–2006).

⁵⁸ Freeman-Grenville 1962a: 133. After Tumbatu, the main city on Zanzibar may have been Shangani (site of the ancient city of Zanzibar). Shangani is still largely unexcavated, but it may go back to the late eleventh century (Juma 2004).

⁵⁹ For Pemba, in 1506, Pedro Ferreira mentions five kingdoms, each with seven towns (Fleisher 2004a: 101).

⁶⁰ On the social role of clothes and fine fabrics, see Prestholdt 1998.

⁶¹ Among the privileges of the elite, Kusimba mentions “the right to blow the great *siwa* horn at marriages, [and] the right to slaughter the expiatory ox after the cleansing ritual of *kuzinga mui*, rounding the town” (Kusimba 1999: 140, after Prins 1971: 18). The situation, however, probably differed according to region. Excavations recently conducted on Pemba show that “the stone cities did not directly control regional production of local goods and manufactured products for export,” and that the use of imports was not limited to elites (Fleisher 2004a: 345, 421–423, versus Kusimba 1999: 96). Elites, however, did monopolize some luxury goods, such as gold and silk, whereas other goods entered the exchange circuits (Horton and Middleton 2000: 92, 112).

During the seventeenth century, one chief, “whose authority had been undermined by the fact that his subjects were able to buy textiles from the Portuguese,” reproached the latter for ruining his country by selling too much cloth to the population at large: “If they had wanted to give cloth to the commoners, they should have first given it to him, and he would then have distributed it to the people deserving payment” (Randles 1975: 120) (also, in a letter sent to Lisbon, the king of Kongo points out how important it is that all European merchandise pass through him [Ekholm 1972: 101]). The privileges of these elites sometimes included access to religious instruction, a key foundation of the ancient Antemoro kingdom of southeastern Madagascar. The Islam practiced was mainly Sunni of the Shāfi‘i school, although João dos Santos writes at the end of the sixteenth century that “many Muslims of the coast follow the Persian sect” (Pouwels 2000).

Whether the cities were ruled by a king or by a “collective patriciate,” it is unfortunate that we have little knowledge of the social organizations in place prior to the sixteenth century, apart from sparse data derived from historical texts.⁶² In some cities, various types of officials took charge of foreign trade, internal public order, religious affairs, and leadership of the army or navy.⁶³ Correia thus writes of a “supervisor [*regedor*] of land production,” a “supervisor of the sea” and a qadi in charge of justice at Malindi in 1498 (Vernet 2005: 402). These were not true state officials, but instead representatives of lineages which exerted authority in designated areas, sometimes on a hereditary basis. The office of “guardian of the soil” (or “chief of the farmers”) was reserved for an elder of the lineage considered as the first to have settled in the city. “Like the ‘Owner of the land’, elsewhere in Africa, the ‘guardian of the soil’ was believed to have the power to communicate with ancestral spirits.”⁶⁴ He was required to possess a recognized knowledge of Islamic science. He decided on the timing of the sowing and allocation of land. This can also be observed in various regions of Madagascar, with the privileges granted to “masters of the earth” or “elders on the earth” lineages. The Swahili also appointed a “master of the sea” (or “elder of the shore”), who had control over certain fisheries and presided over the ritual marking the start of the fishing season. On the west coast of Madagascar, the Sakalava kings in the eighteenth and nineteenth centuries recognized some Vazimba groups as “masters of the water” and owners of the lakes (for example, Birkeli [1936: 20] describes the ceremony called “opening of the water,” an annual

⁶² Malindi, Mombasa, Zanzibar, Pemba, and Kilwa all had “kings” to lead them, but governmental institutions may have varied between cities. While the observations made during the nineteenth and twentieth centuries in Mombasa, Lamu, or Zanzibar probably shed some light on various Swahili organizational principles, as pointed out, it is risky to apply recent observations and analyses to the remote past of 300 or 400 years ago. A separation into two complementary moieties or “demes” for exercising power seems to have been characteristic of some cities (see Allen 1993: 224). The collective system of Lamu has already been mentioned. In Mombasa, a council of twelve sheikhs (leaders of twelve groups) chose as chief the ruler of one of the two confederacies into which the twelve groups were divided. A council of elders (representatives of the dominant groups?) assisted the king of Zanzibar (Middleton 1992: 42).

⁶³ Middleton 1992: 41. During the nineteenth century, on Zanzibar, a representative of the king had a seat in the government of the “towns of the countryside,” with the title *sheha wa serikali* (“shah of the government”) (Middleton 1992: 74).

⁶⁴ Kusimba 1999: 141. See also Middleton 1992: 82.

festival declaring the fishing season open, organized during the month of Volambita [June, in the region of Sakalava], at Lake Ranomena).

The elites exercised control over production activities (metalworking, weaving, etc.). The exploitation of the forests was a prerogative of these elites, as was shipbuilding, which was another way to control contacts with foreign countries and trade flows.

Various sites in the interior of the continent reflect the existence of trade relations with the coast. Engaruka (1400–1700), which reveals irrigated agriculture and intensive animal husbandry, has yielded glass beads, cowries, and copper items. Cowries and glass beads from this period have also been recovered in the region of Sanga (Upemba).

Relations with the outside world must have provided an ideological basis for the political and religious power of the notables who controlled them, giving these notables knowledge that allowed them to deal with the forces of the divine world (Helms 1993: 159). Islam in its different currents brought Islamic magic – one of the component parts of this religion – into Africa, where it combined with African traditions (Hamès 2007). To this day, Islamic magic plays an important role in the Comoros and Madagascar (the northwestern Sakalava region, and the Antemoro region in the southeast).

The relations of the insular cities with the continent were not always peaceful, despite attempts at alliances. Barbosa stressed that the cities of Pate and Lamu were “well walled with stone and mortar, inasmuch as they are often at war with the Heathen of the mainland” (Freeman-Grenville 1962a: 134). Although the patricians’ wealth came primarily from trade, these patricians also made use of a servant class recruited from populations in the interior and probably also Madagascar (Sinclair and Hakansson 2000: 479).

Swahili sultans and traders took part in Indian Ocean trade by sending ships – albeit in limited numbers – and men to Arabia and India. Among the *mu’uallim* or master navigators of the “Indian Sea,” Ibn Mājid listed Arabs, people from Hormuz, India (west coast), the Chola, and the Zanj. The discovery of African pottery (water pots, pans, and bowls) at Ras el-Hadd in Oman shows that the Swahili took part in transoceanic trade (Horton 1996: 243). It was not only traders who traveled, but also pilgrims and students of religion. As early as the fourteenth century, around 1341, Ibn Battūta met an ulema from Mogadishu in the mosque of Hili on the Malabar coast; this ulema had lived for fourteen years in Mecca and Medina, and had also spent time in India and China. Al-Maqrizi encountered a qadi from Lamu in Mecca in 1441, and according to the *Chronicle of Kilwa*, many sultans of the city (and sometimes their heirs) undertook the *hajj*. For example, there is external Arabic evidence for a journey made by sultan Hasan bin Husain in 1411, and an heir of the Kilwa sultanate spent two years in Aden “to study spiritual science” (Vernet 2015). However, we have little evidence of Swahili pilgrimages to Yemen and the Hijāz. The Persian Abd al-Razzaq, writing in 1441, mentions the Land of the Zanj among the countries sending traders and products to Hormuz. Later, during the sixteenth century, Barbosa writes: “The Moors [from Sofala] collect great stores of ivory, and this also they sell in the kingdom of Cambaya at five

or six cruzados the quintal.”⁶⁵ “In 1515, the sultan of Malindi requested authorization to send one of his ships to Goa” (Vernet 2005: 153). The Swahili also embarked as passengers aboard Indian ships sailing to the Orient. In 1515, Pires lists “people from Kilwa, Malindi, Mogadishu and Mombasa” among the foreign merchants present at Malacca.⁶⁶ Some of these merchants used to travel beyond the Malay peninsula, as far as China. The Chinese chronicles mention that in 1415, an embassy from Malindi presented a giraffe to the emperor (see above). Two years later, part of the Chinese fleet sent to the Indian Ocean brought the ambassadors from Malindi back to East Africa. The account given in the *Mingshi* writes that “during the fourteenth year of Yongle’s reign [1416], Mogadishu sent an embassy, along with the countries of Barawa and Malindi . . . Later the ambassadors returned, carrying tribute . . . and in the twenty-first year (1423), ambassadors again appeared with tribute” (Filesi 1972: 39).⁶⁷ Moreover, Barros wrote that the Swahili knew of the existence of an ocean beyond the Cape of Good Hope (Freeman-Grenville 1962a: 85). Ibn Mājid also knew that the coast turned westward, south of Africa: western Africa could be reached through the Mozambique channel (Khoury 1971; Tibbetts 1979: 232; Jouannès 2001: 86); this knowledge, however, was nothing new.

Ships from the main Swahili cities sailed to the Comoros and Madagascar; these routes had long been known, but relations intensified during the fifteenth century. Kilwa, in particular, maintained regular connections with Madagascar, which explains why this city exported rice to Aden. A slave trade developed from Madagascar at this time, with the Comoros probably playing the role of entrepôt.

The Comoros of the “Classical Period”

The Comorian cities appear to have expanded during the fifteenth century. In Anjouan, the city of Sima covered eleven hectares, and Domoni was similar in size, evidence that the population of the archipelago was growing, and that connections with the Swahili coast and northern Madagascar were increasing. Traditional sources mention Shirazi migrations during the fifteenth and sixteenth centuries. One notes a flowering of stoneworking, using architectural forms developed in East Africa. The tympana of the mihrabs and the mosque doors at Sima, Mirontsi, and Domoni (Anjouan) used carved coral, showing the corded motif and bosses on the spandrels of the niches, decorated with geometric motifs known in East Africa. “It was probably during this Classical period of the Islamic architecture in the Comoros that the decoration of alternating black lava blocks and stones of lighter color was invented” (Vérin 1994a: 60). “Peace gates” were ornamented with inscriptions and also magic

⁶⁵ Barbosa 1967: 8; Kusimba 1999: 137. It is possible that the harvesting of ivory was promoted by the sovereigns (see above).

⁶⁶ Pires, ed. Cortesão 1944, 1: 46. The resistance of the Africans to diseases – obviously greater than that of the Portuguese – hints at the ancient integration of East Africa in the exchange networks of the world-system (Pearson 2003: 141).

⁶⁷ Between 1416 and 1423, according to the *Mingshi*, Barawa sent a tribute four times. Ships of the Zheng He fleet visited Barawa twice, after calling at Mogadishu.

signs such as the seal of Solomon, known throughout the entire Muslim world. A pillar tomb, belonging to a sultan, has been found at Mbeni.

As was the case in East Africa, Chinese pottery (celadon and, more importantly, blue-and-white porcelain) was inserted in mihrabs, walls, and ceilings, to ornament mosques, tombs, and houses. Here again, this pottery outnumbered Islamic ceramics. Glass beads, fragments of glass vessels (ampoules for kohl), and chlorite schist have been unearthed (at Sima II, for example). Moreover, burnished local ceramics have been excavated, showing various shapes and decorations (see Wright 1992: 109ff.).

Products were exchanged between the trading cities, and so were fashions, in the field of funerary architecture for example. From the fifteenth century onward, socially prominent people were buried in paneled tombs decorated with carved coral moldings. “Later, moldings were applied using lime mortar; triangular wings were erected at the corners of tombs . . . These wings may symbolize angels who would interrogate the dead on the Day of Judgment” (Vérin 1994a: 61).

The Comoros were well known to Arabo-Persian sailors. In his *Hāwiya*, the *muallim* Ibn Mājid charts positions according to the heights of the Big Dipper:⁶⁸

- at eleven finger widths above the horizon: Anjazija, Grande Comore (Ngazija, whose name is already given by Idrīsī), Hanzuwānī (Anjouan), and Mulālī (Moheli),
- at ten and a half finger widths: Muwutū, namely Maoty (Mayotte) (Viré and Hébert 1987: 75 and n. 41).

Sulaymān al-Mahrī still knew Madagascar as “Qomr,” a name that would later be applied to the Comoros (Tibbetts 1979: 432 n. 60):

Between Qomr and the continent . . . there are only four large islands close to each other; the Zenj sail there; the first island is called Anjazija, the Big Dipper being $11^{\circ}1/4$ [high],⁶⁹ it is sixteen zams away from [the continent]; the second is Melali at 11° ; the third is Domoni at 11° and east of Melali; the fourth is Moutoua, at $10^{\circ}1/2$, and east of all these islands is a great reef four zams away, that is called the “eye of the sea.” (Vérin 1994a: 69)

The Portuguese would not discover the Comoros until 1506, when Afonso de Albuquerque returned from Madagascar to Mozambique, although no information was collected. There, Albuquerque met the flagship of Tristão da Cunha, who was returning from the east coast of Madagascar. The references to the Comoros and Madagascar on the maps of the Egerton manuscript (1511) and Pedro Reinel (1517) probably come from “information gleaned . . . on the African coast” (Vérin 1994a: 72), and also, in the case of Reinel, from data gathered by the expedition of Lopes de Sequeira (Thomaz 2009). In a letter addressed to King Manuel (dated August 31, 1506), the captain of the port of Kilwa, Pedro Ferreira Fogaça, listed six islands among the *Ilhas de Alcomor*: “Lyna, Zoane (Ndzuani), Ouzija (Ngazidja), Maotoe (Mayotte),

⁶⁸ N. Gueunier has recently recovered nautical books written in Swahili and Arabic, owned by Comorian shipmasters; these are similar to Arab nautical books dated to the fifteenth century (Gueunier 1992). *Muallim* means “scholar, master navigator”; the term would take on the meaning of healer–diviner – *mwaliimu* – in the Comorian archipelago (Vérin 1994a: 68) and among the Antemoro of southeastern Madagascar – *moalimo*.

⁶⁹ Sulayman al-Mahrī is more precise here than Ibn Mājid. The name given in the *Umda* of Sulayman al-Mahrī is Angazija.

Acymae (Sima?), and Molale (Moheli).” He notes that “people from Kilwa and Mombasa acquire supplies of cattle, great mil (sorghum), rice, ginger, fruit and sugar from these islands” (Vérin 1994a: 72).

Relations with Madagascar intensified, with a slave trade developing from the northwest or northeast of the Red Island, as accounts from the sixteenth and seventeenth century would later attest.

The trajectories of the merchant societies of the western Indian Ocean were at least affected, if not broken, by fresh events during the late fifteenth and early sixteenth centuries. East Africa, the Comoros, and Madagascar saw the arrival of ships of unknown origin which brought not peaceful merchants, but men with a greed for power and gold, and fueled by a fierce hatred of Islam.

Madagascar (Fifteenth–Sixteenth Century): The Rise of Trading Ports and Development of the Highlands

[The people from the African coast] take away [from Madagascar] all its merchandise . . . sandalwood . . . slaves who are black . . . Sea people arrive and take them in ships and carry them away. Know that they sell them in Yemen, O friend, [and] they reach Jeddah.
(Piri Reis, in Allibert 1988b)

Thanks to their relations with the Comoros and the Swahili coast, the Islamic trading ports of northern Madagascar flourished during the fifteenth century. On the northwestern coast, Mahilaka fell into decline, but new trading towns were created on the coast further south (first of all Langany): these towns exported wood, aromatic resins, gold, rice, and slaves. The latter came from the interior, with caravans. Mahilaka may have been the victim of a competing Malagasy kingdom (“Guinguimaro,” or kingdom of Sada) which we later find established in the same region. While there is no hard evidence for the existence of this kingdom prior to the seventeenth century (Sanchez 2013: 134), the site of its capital, Ankoala, may well correspond to Antrañokaràna, “house of the Indians,” “a place active as early as the fifteenth–sixteenth century” (Vérin 1975a, 11: 596; Sanchez 2013: 138). It is more likely, however, that Mahilaka’s decline was due to the expansion of trading routes with the Highlands, as this city was less favorably situated than Langany for taking advantage of the increasing slave trade. Trade tended to strengthen all exchanges with the Swahili coast. During the second half of the fifteenth century, demographic growth and the arrival of migrants from the African coast produced a significant degradation of the plant cover in the northwest. European written sources provide evidence for the presence of Bantu speakers all along the western Malagasy coast following the sixteenth century. On the northeastern coast, Vohemary enjoyed a spectacular development, in connection not only with the exchange networks of the western Indian Ocean, but also with networks from South and Southeast Asia. New Austronesian arrivals which are attested in Arabico-Malagasy manuscripts and Portuguese texts bear out these interconnections.

Notable environmental changes occurred in the Highlands from 1400 onward, resulting in today’s landscapes. They reflect increased population and its impact on natural vegetation. New groups continued to arrive along the east coast. At the same

time, a shift in habitat onto hills, where villages set up fortifications, reveals a sense of insecurity with regard to the growing slave trade toward the coasts, as well as competition among emerging political entities.

Malagasy data for the fourteenth through sixteenth centuries reveal that hierarchized societies developed in the trading ports of the northwest, the northeast, and in the northern regions (Sambirano), at the junctions of maritime and terrestrial routes, thanks to the slave trade and to control over products for export; hierarchies also appeared in areas of intensive rice cultivation (the Highlands and some valleys of the east coast), and “in the thorny forests of the south and probably in the savannas of the west coast” as well (Dewar and Wright 1993: 450). Besides economic factors, other more ideological factors came into play in social constructions, with the implementation of symbolic systems that were partly inherited, but also partly set up on Malagasy soil. City-states, kingdoms, and non-state societies showed diverse forms throughout the island, expressing cultural blending and adaptations to various environments. Arrivals from indianized and islamized Indonesia led to changes in symbolic codes, influencing both the organization of societies and the relationships of these societies with their environments. The arrivals also triggered the development of intensive rice cultivation along the southeastern coast and in the Highlands, as well as the emergence of stratified social formations revealing general demographic growth, increased relationships among regions, and the island’s growing integration into Indian Ocean networks. The written accounts of Arab sailors reveal a rather good knowledge of at least the northern Malagasy coasts at the end of the fifteenth century. The Antemoro kingdom installed in southeastern Madagascar at the beginning of the sixteenth century is a good example of the various blendings which occurred, showing a strong Islamic influence, as well as African features, on a substantial Zafiraminia substrate.

While the irruption of the Portuguese briefly upset these networks at the beginning of the sixteenth century, the prosperity of Vohemar during the sixteenth and seventeenth centuries shows that Madagascar maintained links with South Asia and Southeast Asia at this time; on the northwestern coast, the trading ports of Langany and Antsoheribory were flourishing, in connection with the Comoros and the Lamu archipelago. The Portuguese intrusion into Madagascar probably slowed down an ongoing process of “swahilization” along the coasts (some merchant communities such as those located at the mouth of the Matatāña River would be cut off from the northern trading ports and would integrate their hinterlands’ agricultural territories); nevertheless, the Portuguese had little influence in the developments that were already visible during the fifteenth century, marked by agricultural intensification and the setting up of chiefdoms in the Highlands, and the rise of trading ports in the north, which were based in part on a slave trade.¹

¹ The evolution of the island obviously contradicts this statement by C. A. Bayly (2004: 50): “The island of Madagascar provides a good example of the essentially internal nature of . . . changes. It was only distantly and indirectly influenced by outside trade and Muslim statebuilding on the East African coast.”

The Islamic Trading Ports

Archaeological Data

The Northwest

The prosperity of the East African and Comorian city-states coupled with expanding trade served to foster the development of Malagasy trading ports during the fifteenth century. However, Mahilaka was in decline at this time, for reasons which are still debated. C. Radimilahy states that environmental imbalances may have played a role; the possibility of a plague epidemic has also been put forward (Wright *et al.* 2005). At the same time, the sites of Nosy Be belonging to the Mahilaka Phase disappeared, with the exception of smaller sites such as Ambaro Atsimo, which has yielded East Asian pottery dated to the fifteenth and sixteenth centuries. Palynological research conducted at Nosy Be highlights forest recovery around 1400 (Radimilahy 1998: 47, 72). In the Ambariotelo archipelago, Nosy Mamoko has yielded Islamic monochrome ware dated to the fifteenth-sixteenth century (Wright *et al.* 2005).

South of Mahilaka, by contrast, trading ports were created during the fifteenth century: Nosy Manja (Langany) at the mouth of the Mahajamba River, and Nosy Makamby (from the Swahili *kāmbi*, “camp enclosed by a fence, fortified precinct”). Kingany (from the Swahili *-kinga*, “to shelter, to form an enclosure”), located in the Bay of Boina, acquired new importance. All these sites were connected to routes going to the Malagasy Highlands: this is probably the main reason for Mahilaka’s decline.

The new trading ports were strongly influenced by the East African coast. One observes a greater use of stone and coral than previously, as well as changes in building techniques. From the twelfth to the fourteenth century, “walls were constructed in regular stone or cut coral courses”; during the fifteenth century, stones were cut less regularly and “laid in a more crude way, not in successive courses, but with the materials simply placed in position and made to fit into one another” (Vérin 1986: 382). The same evolution has been observed in East Africa as early as the thirteenth/fourteenth century (see above). From the fifteenth to the seventeenth century, during the climax of trading port civilization, mosques were built in stone, as were some houses, whose roofs were terrace-shaped: this can be seen along the Swahili coast. The interior of the mosques – which were of limited size – never had columns. Carved coral was used to decorate the entrances of tombs and houses, as well as the mihrabs of mosques. From the sixteenth century onward, following an East African practice, Chinese and Islamic ceramics were set into the walls of buildings; this type of decoration tended to replace the ornamental bosses observed on older buildings (Vérin 1975a: 923). All the structures of the mosques were decorated in this way, as were houses and tombs.

Tombs were of several types. In the quadrangular Rasikajy tombs of the northeast, slabs of carved coral limit the interior of the tomb. Islamic tombs of the northwest show small enclosures; “the courses of the walls [are] bonded in horizontal series one above the other” (Vérin 1986: 150); at times, they show wings in which coral was used as a decorative element (Vérin 1979b: 69). Coral was also carved to make funeral tablets. Toward the end of the fifteenth century, some pillar tombs and side panel decorations appeared, similar to those known in East Africa. Tombs were usually oriented along an

east-west direction, according to Malagasy rules. However, P. Vérin has noted orientations to the northwest and northeast respectively, at two sites at Nosy Makamby (1986: 161). In general, as P. Vérin points out, the architectural features noted can be connected to the African coast; however, Vérin makes two remarks: “[Firstly,] there is a clear break in time between the appearance of a new style of building in Africa and its adoption in Madagascar. In the second place, many of the architectural details seem to have become simplified in the crossing from Africa to Madagascar” (1986: 381–382). These elements common to East Africa and Madagascar are not known in Southeast Asia. They may thus reflect innovations that appeared in the Swahili world, unless they “reflect the expansion of a provincial Middle Eastern style” (Vérin 1986: 387).²

Langany, mentioned in Arabic sources, was the capital of the Islamic trading ports during the fifteenth century. Merchants settled on Nosy Manja Islet (covering 5 to 7 hectares) at the mouth of the Mahajamba River, and in Langany on the coast, to the southeast, eight kilometers away. Langany has yielded ceramics dated to the late fourteenth century and the fifteenth century. P. Vérin has listed forty-five tombs, two mosques, five houses, and eleven ruins of various types. The tombs show small round *monara* pillars, one per tomb, each on a square base (Vérin 1975a: 54off.). Although here we are within an Islamic context, we may nonetheless observe the symbolism of Buddhist stupas. The settlements were still prosperous during the sixteenth century, and they remained active until the end of the seventeenth century. They are mentioned in Portuguese and French chronicles under the names “Massalagem” (or “Mazalagem”) Velha and Vieux Masselage, respectively, from the Arabic Manzalāji (see below). Father Luis Mariano notes: “Almost all the inhabitants are Muslims, first of all the notables, such as King (Samamo).” “[The Muslims] are not well instructed in their religion, they practice it so badly that it is possible to say that all they have is the name of Muslim. The Moors from Malindi and Arabia who come yearly to this port with their vessels to acquire large numbers of slaves . . . push them to adopt Islam” (COACM, 11, 1904: 14). Portuguese captain Paulo Rodrigues da Costa is surprised at the degree of sexual freedom enjoyed by the king’s daughters and nieces (Kent 1982: 10).

Settled on the mainland to the south, at the entry of the Bay of Boina, Kingany comprises three sites. Site II has revealed two mosques, which may signify a division within the Islamic community. One of the tombs with paneled walls contained an elaborate tablet made of carved coral featuring “a mihrab from which a glass lamp is hanging; on each side of this lamp, there was at one time a stylized lotus flower, in relief” (Vérin 1986: 163); this reveals an Indian influence rather than a link with Iran. The same floral motif has been observed on a funeral epitaph at Koyama in Somalia. Another tomb shows coral tablets and bosses decorated with cross-shaped motifs “which are reminiscent of those used in early tattooing, in the west and the south” of Madagascar (Vérin 1986: 165); they are also reminiscent of magical motifs called “lunette signs,” known in the Muslim world and found in Antemoro Arabico-Malagasy manuscripts (Vérin 1986: 382). “These ornamental bosses,” notes Vérin,

² The setting of plates into the plaster of walls can be seen earlier in Europe on the facades of Romanesque churches, thus in Emilia-Romagna around the eleventh century.

“have been observed only at Kingany and along the East African coast.” At the beginning of the sixteenth century,” according to Vérin, “they were replaced by imported ceramic ware, which was set into the surface of all the best tombs during the sixteenth, seventeenth and eighteenth centuries . . . The houses here were less decorated [than those in Africa]” (1986: 383).³

South of the same site, a tomb with paneled walls had been built, with an octagonal pillar more than 3 meters high erected on its east side; it is comparable to tombs with pillars known on the East African coast (at Kaole, for example). The base of this pillar is square. It is the only example of a tomb with a high pillar known in Madagascar. According to Damir ben Ali, in the Comoros, tombs with pillars were the apanage of sultans who had died during their reigns. A Malagasy tradition reports the use of a column by Muslims who had made the pilgrimage to Mecca (Vérin 1986: 170 n. 10).

Significant quantities of celadon and Ming blue-and-white porcelain were imported. “The late fourteenth and early fifteenth centuries saw the arrival of the first Chinese imports of celadon and blue-and-white porcelain, alongside blue or green-blue Persian ceramic and Islamic monochromes. Martabani jars of Chinese origin also appeared at this time” (Vérin 1979b: 82). Celadon and blue-and-white Chinese ware would become particularly abundant from the sixteenth to the eighteenth century in the largest of the trading ports; Islamic imitations of celadon and blue-and-white porcelain of Thai or Vietnamese origin have also been found.

Excavations have unearthed various types of local ceramic ware, some featuring “horizontal lines, wavy lines or zigzags with triangular impressions,” a type of pottery also found in Imerina and Anosy during the same period (Vérin 1986: 165). Ceramics from Kingany show relief moldings, a decoration found also at Asambalahy, in the southwest, and along the East African coast.

A large number of spindle whorls have been retrieved at the main sites (Vérin 1979b: 71), showing the significance of weaving (the fibers used may have come from wild or cultivated cotton [*hasy*]). At the beginning of the seventeenth century, Mariano would note that each household owned three or four looms (*COACM*, 11: 14). Part of this production may have been destined for commerce on the island.

Chlorite schist has been excavated, at Kingany, for example. It may have come from Vohemar, or from Ambilobe or Mahazoma. Mahazoma has yielded a chlorite-schist statuette that resembles a piece found at Zimbabwe (Vérin 1975a: 325 fig. 108). It may indicate connections between Mozambique and northern Madagascar. Together with the Comoros and the coast of Malindi, the Malagasy trading ports also exported quartz, gold, textiles, and slaves, besides common goods such as rice and cattle.

Oral traditions following the model of the Shirazi myth of East Africa and the Comoros recount the creation of the main trading ports by linking them to the migration of a man from Basra called Hassani. “When they arrived, the Arab colonists received the name “Anti-Alaouts” [Antalaotsy, ‘people of the sea’] from the natives: from that time on, this name has been applied to these people and to their descendants”

³ Along the East African coast, coral bosses were replaced by “imported Persian or Chinese pottery from the fifteenth century onward” (Vérin 1986: 165).

(Guillain 1845: 357ff. n. 6; Vêrin 1972: 89ff.). The reference to Shirazi immigrants in the Comoros and Madagascar during the sixteenth century reveals not only close relations with the East African coast, but also a renewed importance of Iran at this time.⁴

Langany, sometimes transcribed “Lulangani” (Arab sources have “Lūlūjān”), is a toponym of Swahili origin whose core is the Persian word *lang*, “a stopping place for caravans,” the final *-ni* of the name being the Swahili locative. An anonymous English text from the ship *Frances* (1640) describes trade between the *antalaotse* and the people from the Highlands via “a river south of Matthewlodge” (the Mahajamba River, if Matthewlodge corresponds to Langany, and the Mahavavy River if this trading post refers to the “Mazalagem Nova” described by the Portuguese, known as “Nouveau Masselage” by the French, in the Bay of Boina): “To ys river comes ye Hoves with their cafalo in March and April with 10,000 head of cattle and 2 or 3,000 slaves” (Ellis 1979: 157).⁵ The account from the *Frances* also describes trade conducted by Mackamy [Makamby] Island with the interior via “the Marapony River” located in the east (probably the Betsibòka River) (Ellis 1979: 155). Slightly earlier during the seventeenth century, Father Luis Mariano described caravans arriving from the country of the Hova:

Large caravans lead many oxen and many slaves from the interior [of the island to the city of Boina], and fine-looking ships, similar to the cangalhas of India . . . , bring there goods from all parts of the island, by sailing along the coasts and coming either from the south, or from the north, often from regions more than a hundred miles away. (*COACM*, 11: 14)

“[Some Buki slaves],” writes Mariano, “are led from the kingdom of Uva, which is located in the interior of the island, and they are sold at Mazalagem to Moors from the Malindi coast” (Vernet 2005: 175, from Leitão 1970: 206)

While there is no straightforward evidence for the existence of such large caravans a century earlier, the evolution of the Highland sites seems to reflect an emergence of chiefdoms or states fighting one another for control over territory and the capturing of slaves. According to the Portuguese writer Diogo do Couto, who relates the voyage of Balthazar Lobo de Sousa in 1557, the Moors of Langany, ruled by a sheikh, were in contact with a Malagasy king called Lingui, who lived in the Mahajamba River valley. “[Lingui’s] kingdom extended as far as the Duria River,” which bordered the state of the “powerful king Tumgumaro” (Guinguimaro) (Sanchez [2013: 134], however, considers the data on the kingdom of Guinguimaro or the kingdom of Sada as later additions dating to the early seventeenth century) (see below).

⁴ As previously stated, the “Shirazi” origin of the dynasty of Kilwa (see the “Chronicle of Kilwa”) is a historical reconstruction, making use of the legend of the seven brothers known throughout the East African coast; this reconstruction was probably marked by the influence of Iran during the fifteenth century. See above and Oliver and Mathew 1963: 120, 123; Trimingham 1964: 10–11.

⁵ “By setting up with their caravans in March–April, the Merina probably respected the dates of ships’ arrivals” (Hébert 1989–1990: 78). The first mention in French of the term Hova and of trade in northwestern Madagascar dates back to 1668: “The Houvs traffick with New Massalege [Nosy Boina],” *Journal Maritime*, 1668 (Arch. Minist. Colonies). Vernet (2003) suggests that 3,000 to 5,000 slaves were exported yearly by Swahili traders from the ports of northern Madagascar. While this number is probably too high, 1,000 appears plausible.

Merchants of the trading ports also traveled to the Highlands for trade. Relations with the inland inhabitants were conflictual at times, as shown by Father João Gomes in 1620:

When I asked a negro from Mazalagem if his fellow-countrymen used to go and trade at Vua [Uva, the Merina country], he replied that the people from Mazalagem no longer go there since the people of Vua, who are very wicked, had stripped them of their wares and their silver and had killed a great number of their people. (Hébert 1989–1990: 78)

Archaeology has confirmed the relative antiquity of Nosy Manja (Nosy Langany) in the Bay of Mahajamba as compared to other trading posts. To date, “the *antalaotse* tradition acknowledges Langany as the capital of the glorious times of the Muslims” (Vérin 1972: 92).

“Guinguimaro,” the First Malagasy Kingdom?

One cause for the decline of Mahilaka may have been the emergence of a Malagasy kingdom, one that the Europeans would find already established in the Bay of Ampasindava during the seventeenth century and called Ankoala, kingdom of Sada or “Guinguimaro.” We still have no evidence that this kingdom existed as early as the fifteenth or sixteenth century (Sanchez 2013: 134).⁶ This said, it has already been noted that Antrañokaràna, the possible location of this kingdom’s capital, dates from the fifteenth or sixteenth century. The archaeological surveys conducted so far in the Sambirano valley show only settlements dated later than the Mahilaka Phase. Constantly at war with the Muslim cities of the coast further south, the kingdom of Guinguimaro appears to have forged alliances with Arabo-Swahili elements (see below). Marked by African and Islamic influences, the “Boucke” kingdom of Sambirano illustrates syntheses occurring along the island’s coasts, as well as in inland kingdoms, especially from the fourteenth century onward. The Sambirano kingdom provides one of the first examples of a Malagasy kingdom which attempted to combine control over its domestic resources (gold from Ambilobe), its internal routes (toward the east coast: Vohemar and the Bay of Antongil), and its relations with the outside world.⁷

What little data exist on this kingdom relate to the late sixteenth and the seventeenth centuries. To the north of the “Bambala coast” and the Bay of Boina, at the beginning of the seventeenth century, “Buki” (= Malagasy) chiefs held sway over the “Moors,” who had been weakened by the arrival of the Portuguese. While several separate Malagasy kingdoms appear to have developed, Guinguimaro, who controlled the Bay of Narinda and Sada, was “the most powerful king on the island” according to

⁶ The name of this kingdom does not figure on the anonymous Turin map attributed to Giovanni Vespucci (1523), in contrast to what Wright *et al.* (2005) have noted. According to the texts, Guinguimaro appears to be the name of either the king or the kingdom.

⁷ During the seventeenth century, the Dutchman Van der Meersch “learned, at his expense, that he was not the only man who was buying slaves in the Bay of Antongil. On the west coast of Madagascar, there was a king, the most powerful in the whole island, called Ronetans or Ronstanes, who was approached by the Portuguese whenever they wanted slaves. This king, who was greatly feared, sent his ‘lucorongh’ chieftains to go through the country with a hundred or two hundred soldiers and to exchange either oxen, or Portuguese fabrics for slaves. He did this so effectively that he gained a virtual monopoly over the north of the island” (COACM, III: 198; Vérin 1986: 103).

Mariano.⁸ His capital, Ankoala, was set up “along the river of the same name” in the Bay of Ampasindava (probably in the delta of the Sambirano River) (*COACM*, 11: 647ff.). Diogo do Couto (who published his accounts between 1602 and 1616) also writes: “The Duria River . . ., [which] has its source in the eastern region, passes through land belonging to another king [than Manzalage’s ruler] called Tumgumaro, who is the most powerful of all the kings of the island. He is continuously at war with his neighbors and he sells his prisoners to the Moors of the island of Sada” (*COACM*, 1: 100; Vérin 1986: 200). Sada was either the island of Nosy Be, sometimes called Assada during the seventeenth century, or the trading port of Sada, which may have been located in the Bay of Anorotsangana; the kingdom of Guinguimaro would ultimately occupy Sada (Belrose-Huygues 1982: 59).⁹ While Sanchez (2013: 136) notes that Sada may have been located on Nosy Mamoko, in the Bay of Ampasindava, a map drawn by Fernão Vaz Dourado (1580) names Sada the Radama Islands, south of Nosy Be; moreover, Portuguese sixteenth-century maps mention “Cady” in the Bay of Boeny (Sanchez 2013: 79–80).

An account from the ship *Frances* points out the existence of various populations and languages encountered in northern Madagascar and inland:

There are three divisions of people viz, Bouckes, Bumballs, Hoves. Ye Bouckes are they yt inhabitants at Assada to ye utmost of ye NE end of St Lawrence, and extend SW . . . so farr as Old Mattalodge. Wst’ wd along ye coast of ye sea they are called Bumballs; and ye inland people and mountaineers are called Hoves. They have three speeches. Ye Bouckes and Hoves do agree in yr speech, as ye Ballyes have a speech by themselves, and they of Masselage speak both ye Ballyes speech and ye Arabb Toung . . . They of Mussalage [Langany] are Mahometans. (Ellis 1979: 158)

It is remarkable that the inhabitants of the “kingdom of Assada” (the kingdom of Ankoala) are viewed as different from the “Hoves” of the interior, although they speak the same language. The manuscript relating the voyage of the ship *Frances* clearly depicts East African influences (from the matrilineal area of the Bantu languages):

ye first I treat of is Assada where ye greatest king of all ye country lives and ever since ye Portugualls had any knowledge of ye place he hath held his residence in ye bottom of Assada Indraft . . . Seven years since died this kings father there who was called Ginemaro, in whose time ye Portugualls and ye Moores had quiet comerce at his towne called Mangakelly, scituated

⁸ The manuscripts give various spellings for the king’s name: Tingimaro, Tongomaro, Ginemaro, and so on. Belrose-Huygues, who quotes an original Portuguese text that has “Quinguimaro,” states that “Guinguimaro” is the exact spelling of the name in Mariano and Da Costa (1983–1984: 169). Confusion may have arisen between a place name and a king’s name. English accounts mention an island in the Bay of Jungomar or Konguomorro (N. Downton, 1610, in *COACM*, 1: 473–476), Gungomar (S. Purchas, 1613, in *COACM*, 1: 495–498), or Canquomorra (in an account given of the voyage of the English ship *Union*) (Sanchez 2013: 135). The king killed the captain of an English ship (*COACM*, 1: 423, 425, 473, 498). Tingimaro seems to be a nickname (“many vulvas”) referring to the king’s great number of wives (Vérin 1986: 208). The term *konko*, “mangrove,” may have given rise to names such as Konguomorro and Canquomorra.

⁹ Moreover, the manuscript relating the voyage of the ship *Frances* (1640) gives Assada as the capital of the kingdom of “Ginemaro.” It is possible that the name “Assada” or “Sada” refers to several distinct places, with the capital of Guinguimaro in the Bay of Ampasindava. At the end of the sixteenth century, a nephew of the sultan of Langany founded Boeni (Antsoheribory); this may have happened after his uncle’s defeat by Guinguimaro (*COACM*, 11: 69).

on a lland in ye bottom of ye Indraft . . . The king of Assada succeeded y ye female issue. Kings children cannot inheritt, but it must be ye kings eldest sisters son, yt hath right to ye crowne, this king had 400 wives and concubines, all in general are his slaves, for if any offend him, he sells them for slaves . . . They honr him as a God and he governs like a tyrant . . . Ye king is very bountifull to his officers for I have seen 40 beeves killed in one day and divided among ym. . . It was their custom when their king dyed, for their wives to conceal his death, for a year, for all his wives and servants are put to death for to do him service in ye other world. (Ellis 1979: 158–159)¹⁰

While this manuscript describes a “quiet commerce” between “Ginemaro” and the Moors (Arabo-Swahili people from the East African coast), other chronicles reveal the expansion of this kingdom toward the southwest and its conflictual relations with the Muslims (*antalaotse*) established in Madagascar, who were directly competing with him for trade. Mariano writes:

Most of the Moors [= Muslims] are hated and persecuted by the Buques, who force them to dwell either on islets, like King Samamo and Bimaro, or right on the coast. (*COACM*, 11: 74; see also Kent 1982: 9)

The supposed hostility of the “Buques” certainly refers to the political situation then prevailing between the Malagasy king Guinguimaro and the *antalaotse* chiefs. According to P. Azevedo, King Guinguimaro is “almost always at war against the king of Mazalagem”; by contrast, Guinguimaro “is on friendly terms with the Arabs and he always has one Arab with him whose advice he follows scrupulously with regard to foreigners” (*COACM*, 11: 249–250). In Guinguimaro’s place, “the Muslims are even more numerous than at Mazalagem,”¹¹ which implies conversions of Malagasy, since Azevedo notes that “the inhabitants of Guinguimaro are Buques” (*COACM*, 11: 249).¹² In Boina, the mention of “inhabitants almost all Muslims” once again reflects a process of conversion; Mariano thus writes in 1617: “There are many Arabs in this city [Mazalagem], who have built a mosque . . . , but there are also many Malagasy people, who make up a majority of the resident population” (*COACM*, 11: 267).

The North and the Eastern Coast

On the northeastern coast, the city of Vohemar was flourishing during the fifteenth and sixteenth centuries. Texts written by Mayeur, in the eighteenth century, reveal the existence of stone buildings, which later disappeared:

Just before arriving south of Vohemar, one can see the remains of two stone buildings of a square shape, which seem to be old . . . It is customary [among the people of this region] to say that they were built by white men who inhabited this part of the island in remote times. At that

¹⁰ On the execution of the wives and servants of the defunct king, see ancient testimonies relating to Mutapa, Manica, and Quiteve, in Randles 1975: 92.

¹¹ *COACM*, 11: 13–14, 317–318, 327. By contrast, João Gomes, describing the towns between Mazalagem and “the island of Tinguimaro,” writes that “the inhabitants of all these countries are pagan Bukes” (*COACM*, 11: 329).

¹² Mariano also writes: “It would be better to go first into the country of the Bouques, where Tinguimaro rules, in northwestern Madagascar; this king resides in the bay [of Ampasindava?] where trade is more active and food more abundant than in the rest of Madagascar” (*COACM*, 11: 266).

time, there was a point of land which extended far off the coast and formed a fine, wide, safe harbor . . . but one day a strong hurricane submerged the point, and the harbor was destroyed and silted; after this disaster, the settlement was abandoned and the white men left. (Corby and Mayeur 2011: 19)

The excavations conducted in the cemetery of Vohemar from 1941 onward are famous due to the wealth of the discoveries made there and to the total absence of scientific rigor of these excavations.¹³ The tombs, some bordered by carved coral slabs, yielded skeletons and abundant funerary assemblages, in contrast to the tombs in the island's northwestern region. Two-thirds of the 246 tombs excavated in 1941 and half of the 310 tombs opened in 1942 contained burial offerings. Eight sets of tombs have been differentiated. "The tombs bordered by well-fitted slabs proved the most fruitful," write Gaudebout and Vernier (1941b: 103). "It appears that some wealthy individuals were buried in the eastern section of each part of the cemetery" (in Madagascar, the east is a direction that is connected to the ancestors and to primogeniture); unfortunately, we have no map of the totality of the excavations; therefore it is difficult to shed light on principles of social organization (Vérin 1972: 27). The wealth of some tombs, however, clearly shows the existence of elites. "It would be boring [*sic*] to describe all the tombs," write Gaudebout and Vernier (1941b: 103). They provide us only with the following "synthesis":

The tombs [containing archaeological material] have yielded a total of about 800 objects; while some tombs contained only three or four artefacts, others contained as many as a dozen or more. The richest tombs were located in the eastern part of the clusters; they were obviously linked to the ruling families. Thus one could have the luck to find beside the skull an iron stylus pointing to the east; on the forehead or the occiput, a Chinese bowl and red glass beads; the remnants of an embroidered cap covering the top of the head; before the face, a bronze mirror, a copper needle and a kohl phial (in a female's tomb); under the chin or behind the neck, a spoon made from shell; around the neck, agate or rock crystal beads; before the chest, a Chinese plate; against the chest or along the thighbone (in a man's tomb) a saber or a machete, tip pointing eastward; along the humerus, an iron knife; copper or silver bracelets on wrists; various rings on fingers; chains on ankles, and, lastly, near the feet, a chlorite-schist vessel, usually upside down, with or without lid, or a footed cup of the same substance: note that this type of cup was always found in a level higher than that of other objects. (Vernier and Millot 1971: 19)

A large plate (sometimes Chinese celadon ware) was often vertically planted to the east of the skulls. Chinese or Islamic bowls were placed on the foreheads of the deceased (Vérin 1986: 221). An incense burner was probably left above the tomb.

¹³ The excavations in the Vohemar cemetery call to mind a treasure hunt rather than an archaeological research project: Gaudebout and Vernier opened 246 tombs in 1941, and Gaudebout "explored" 310 tombs in 1942! Other "excavations" were conducted, by C. Poirier and by J. Millot, in 1948, by E. Vernier and S. Raharijaona, in 1955, and by E. Vernier in 1962. P. Vérin (1975a: 774) has rightly criticized these excavators: "When one takes the responsibility of opening 461 tombs [even more than that, in fact, over the two years 1941 and 1942], one ought to present detailed results." Unfortunately, the objects excavated did not receive indelible numbers linking them to their original tombs, and, except for a few tombs, no record of the position of the objects has even been published. As Vérin notes, "it would now be possible to date each tomb at Vohemar within a range of fifty years, had the 1941 data been properly and completely collected."

The researchers/looters make no mention of local ceramics: they were obviously not interested in them. In Vernier and Millot's text (1971), for the 316 objects or sets of objects described, only 19 are mentioned with their tombs of origin. While the "Notes" written by Gaudebout and Vernier in 1941 give a "statement of the objects collected in the three sectors that have been excavated," tomb after tomb, we are usually unable to connect these lists to the objects scattered among various museums (Paris, Nîmes, and Antananarivo).

The Chinese pottery excavated is dated to the period between the thirteenth and seventeenth centuries: it includes "brown monochrome" (dated to the Song period), "white monochrome" (Song or Ming), celadons (some showing a "head-to-tail" fish motif, dated to the thirteenth or fourteenth century), and blue-and-white porcelain. While the oldest blue-and-white porcelain vessel is a small cup dated to the fourteenth century, most of these objects date to the fifteenth and sixteenth centuries (McBain 1992) and some to the seventeenth century (see Zhao 2014: 98). The gourd-shaped ceramics found, as well as the celadons, may date as far back as the early fourteenth century (Schreurs *et al.* 2011: 115). Some pieces may be imitations of Chinese pottery, but are of Islamic or southeast Asian origin. Using the reports added to the 1941 "Notes," it remains impossible to estimate quantities of Chinese pottery as compared to Islamic ware (Vérin 1975a: 773). Among the latter, Vérin signals dishes, white-cream bowls "with ears," and "large bowls with a red paste, decorated with arabesques." One dish excavated is believed to bear an inscription in an Indian language, and a small bowl dated to the fifteenth century is "decorated with bands showing Sanskrit characters" (Vérin 1975a: 804–805).¹⁴

The availability of blue-and-white porcelain reveals Vohemar's level of wealth, although the plates excavated are generally small and relatively coarse. The artisanal workshops of southern China, and Indochina, produced coarser ceramic ware for export. While cups dating to Emperor Jiajing's reign (sixteenth century) have been unearthed, curiously, no Chinese ceramics bearing Islamic script have been found, although these ceramics were commonly produced for export to Muslim countries at the beginning of the sixteenth century. Unfortunately, we do not know how the importation of goods was organized at Vohemar, nor who controlled it, nor the ways in which luxury goods were redistributed.

The *qilin* (*ch'i-lin*), a mythical beast and an ominous figure, is one of the decorative motifs of the Ming pottery that has been discovered. "The common occurrence of the *ch'i-lin* in the decoration of the plates in Madagascar and the Philippines," note Vernier and Millot (1971: 113), "is in sharp contrast with its almost complete absence in Chinese porcelain dated to the same period found along the East African coast." As Zhao Bing (2014) suggests, the *qilin* may be the source of the Malagasy myth relating to the *songomby*, a fantastical and dangerous beast. Another propitious motif is that of the *lingzhi* mushroom, an emblem of immortality. Plant motifs use flowers with decorative and symbolic value, such as peonies and lotuses. Chinese characters inscribed on the backs of the plates also provide auspicious messages: "Long life, wealth and honor" (Zhao 2014: 94, 108), along with a *shu* character signifying longevity, as seen on a bowl,

¹⁴ Items originating in Valencia, Spain, have also been identified (Amigues 2011).

also known at Fort-Jesus, Mombasa (Kirkman 1967: 7, fig. 25; Rafolo 2000). Thus these ceramic items were not merely prestige goods, and thus hoarded, but were also magical objects, whose beauty and relative rarity reinforced their efficiency (the way in which each object was placed in connection to the corpse clearly expresses this symbolic dimension). Throughout the Indian Ocean, celadons were also thought to have protective virtues, most specifically as protection against poisons.

Local pottery is represented by spherical jars and bowls, often decorated with “a wavy line incision below the rim, familiar from both Irodo to the north and, later, Nosy Mangabe to the south” (Dewar and Wright 1993: 444) (Vérin describes “festooned chevron patterns” [1975a: 779]). Some pieces imitate chlorite-schist vessels.

Vohemar has also yielded bronze mirrors of Chinese origin, kohl pins and phials, and glass bottles. In the absence of good research, it is difficult to give datings and origins for this type of glass. Many carnelian, quartz, and glass beads (of Arab, Indian, and also Venetian origins, with some glass beads possibly of Indonesian origin)¹⁵ have been discovered, as well as metallic (silver and gold) beads. Carnelian beads were imported from Cambay, but some were probably cut in Madagascar. Beads made of red coral appear to have been the privilege of important people (Vérin 1975a: 814), which reflects the valorization of red, the color of the nobility throughout Madagascar. The name used for glass beads, *bijikely*, also used on the west coast, is borrowed from the Malay *biji* (from the Sanskrit *bija*), “seed, a descriptive prefix or numeral coefficient used with the names of small objects.”

Small bone vessels were manufactured. A cylindrical box shows a motif consisting of “little rosettes reminiscent of those on the plate of the Kingany lamp [on a tomb plaque]” (Vernier and Millot 1971: 76–77; Vérin 1986: 244).

Rings are the type of jewelry most often excavated (286, of which 272 were crafted in silver), along with manillas, and earrings. A few items were made of gold: bulls from a quartz-and-carnelian necklace, rings, and leaves of rolled gold in tubular form. Two gold coins have been unearthed: one imitates an Abbasid dinar, and the other a Fatimid dinar from Egypt. One of these coins was found “in the mouth of Skeleton C59,” while the other was “attached by a chain to the forehead of Skeleton C62” (Gaudebout and Vernier 1941b: 110; Vérin 1986: 251). Among the jewelry unearthed at Vohemar, Gaudebout signals “two small gold medals, one with Arabic signs translated as ‘Year 515 Sheikh Salim ben Radjab’ [1121], and the other bearing characters [that he] could not decipher”; in addition, one silver ring bore “half-obliterated Chinese characters on the bezel.”¹⁶

The working of iron and precious metals were significant activities in the trading ports. Blacksmiths and artisans who produced luxury goods certainly held high status.¹⁷

¹⁵ Cf. Van der Sleen (1960: 190) on beads with chevron pattern. With techniques now available, it would be interesting to undertake a complete study of the beads from Vohemar.

¹⁶ Letter dated November 8, 1941, from P. Gaudebout to the director of the committee on studies and scientific research (Martin 2010).

¹⁷ Among the Tañala of the Ikongo region, blacksmiths’ taboos were similar to those of kings (Beaujard 1983). L. L. Junker (1994: 16) emphasizes the high status of blacksmiths “and of other producers of precious goods” in the ancient trading cities of insular Southeast Asia, due to their special relations with the elite. Junker also notes the mystical power and ritual taboos associated with craftsmen working with metals, for example, in the societies of the Philippines.

During the seventeenth century, Flacourt mentions a goldsmith in Anosy whose ancestors hailed from Vohemar. In Anosy, the use of gold was restricted to kings and princes. Members of lower social categories were only allowed to “wear silver and copper shackles” (Flacourt, ed. Allibert 1995a: 169). It may be that the same rules applied in Vohemar, where various gold ornaments were found in tombs located in the eastern central part of Sector C (the deficiencies in E. Vernier’s notes, as already pointed out, do not allow us to take this analysis further).

Part of the gold was imported, and part locally produced (in the hinterland of Vohemar). Silver and copper were imported. The significance of silver ornaments in the Matatàña valley caused the first Portuguese to suppose, wrongly, that it was produced locally. All three metals – gold, silver, and copper – are associated with the three worlds forming the universe in Malagasy symbolism: heaven, water, and earth.

The tombs of Vohemar have also yielded “spoons” carved from *Turbo* shells, also known at Talaky, on the southern coast of Madagascar. They have usually been found close to the deceased person’s neck. Vernier and Millot (1971: 78ff.), and Vérin (1975a: 830) have suggested a Southeast Asian origin for the industry producing these “spoons.” Vernier and Millot suggest that these “spoons” may depict symbolic funerary vessels, while Vérin notes that “Chinese and Japanese porcelain spoons have a shape that is very similar to some of the Vohemar spoons” (1986: 256).

Remnants of textiles have been analyzed recently (Athénor 2010). They were made of cotton (which was probably imported), fibers of the banana tree *Musa textilis* or raphia, then dyed with indigo or indigenous plants. An object found in Vohemar has been interpreted by C. Allibert as “a stamp for imprinting fabrics” (2011b: 154–155).

Various authors have stated that these tombs show an Islamic influence in their orientations, with the dead persons lying with their heads towards the east, on their right shoulder and facing north. Yet the wealth of the tombs clearly distinguishes them from the Muslim tombs of the northwestern coast. Arabic script was probably known at this time. During the excavations of 1941 and 1942,

M. Troubat (then 12 years old) clearly remembers the presence of lengths of bamboo tubes placed in tombs behind the backs of some skeletons. These bamboo tubes contained texts written in Arabic characters. He remembers that in order to protect these inscriptions, the bamboo segments had been slid, the narrower tube pushed into a wider one. It is likely that each of these bamboo tubes had kept its node dividing its fractions of hollow stem into segments (interstitial separation) on one side (but not the same side as the other tube), creating a sealed assemblage once the two parts were joined. (Allibert 2011b: 151, 153)

As already noted, the abundance of Chinese ceramics and the presence of other objects related to eastern Asia lead us to believe that migrants from Southeast Asia contributed to Vohemar’s expansion. It is likely that contacts were maintained with Southeast Asia at the time when Malacca was rising to prominence, during the fifteenth century. Various authors suggest a direct or indirect Chinese influence, through Indonesians influenced by China or Chinese (of mixed origin?) settled in Indonesia. Although Schreurs *et al.* (2011) note some similarity with tombs from southeastern China, more precise comparisons and datings are needed. Among the practices possibly inspired by China, these authors mention that of placing incense

burners on the tombs, as well as the depositing of a mirror in front of the dead person's forehead, which is supposed to light the way to the next world (Schreurs *et al.* 2011: 121). Vernier and Millot note that mirrors were also placed in front of the mouths of the dead. A pierced circular disc found at Vohemar recalls the Chinese *bi*, which was copied, especially under the Song (see exhibit no. 71.1949.12.143 in chlorite schist at the Musée du Quai Branly).

Various sites are known south of Vohemar. The upper layers at Bemanevika have yielded celadon dated to the fifteenth century (Vérin 1975a: 855). Chlorite schist continued to be worked, for the manufacture of beads, vessels, and other uses. The Rasikajy appear to have been concerned with water quality: remnants of wells made of chlorite schist have been unearthed at Bemanevika and Mahanara, and a water tank carved in stone has been excavated at Antalaha (Vérin 1975a: 874).

In the region of the Mananara River, smaller sites belong to the so-called Serenambe Phase (thirteenth–seventeenth century), as do villages of the Fenoarivo region (fifteenth–seventeenth century). Shards of lathe-turned chlorite-schist vessels have been unearthed. At Ambataria (1.4 hectares), surveys have yielded cattle bones, carbonized grains of rice, and carbonized fragments of yam and, purportedly, of *Cordyline fruticosa* (Dewar *et al.* 2010). If this plant is indeed *Cordyline fruticosa*, this discovery would indicate a Southeast Asian influence. This plant has never been found in Madagascar, however (see Boiteau *et al.* 1997). The Lakaria site has yielded fragments of blue-and-white Chinese porcelain (possibly dated to the fifteenth or sixteenth century). Inland, the perched site of Vohidrazaña (“village of the ancestors”) has yielded a few shards belonging to the Serenambe period (although most of these discoveries belong to the ensuing Ambitsika Phase) as well as Chinese blue-and-white ware.

South of Tamatave, the site of Ambodisiny has yielded celadon dated to the fifteenth century, as well as porcelain of the blue-and-white type, and beads made of rock crystal, perhaps destined for export.

At this time, Zafiraminia were settled in southeastern Madagascar between the Sakaleoña and Matatàña Rivers. As previously noted, various objects made of chlorite schist have been discovered in this region, although they have not been dated. The lower valley of the Matatàña River was one of the most fertile and populous regions along the eastern Malagasy coast. During the fifteenth century, a sizeable village was settled at the mouth of the river, on its northern bank and along the ocean, on the now abandoned site of Ambohabe. This site extended over one kilometer along the coast. Pannetier has collected many fragments of chlorite schist during surveys, as well as shards of local pottery (1974: 63). More recent excavations by Griffin have revealed the existence of many sites along the coast, and in the Matatàña valley, during the period he terms the “Ambohabe Phase.” Potters used powdered chlorite schist to produce ceramics imitating the color and shiny aspect of this stone. Some decorations recall pottery from Imerina dating from the Antanambe and Ankatso Phases or ceramics found in Anosy (Griffin 2009: 121ff.). As was the case in other trading ports, Ambohabe’s population was certainly of diverse origins. The Onzatsy group, related to the Anjoaty of the Vohemar region, probably lived in Ambohabe for several centuries. According to oral and written traditions (found in Arabico-Malagasy *sorabe* manuscripts), during the second half of the fifteenth century, new Muslim migrants

arrived at Ambohabé; they were the founders of the Antemoro kingdom. It is highly likely that the Arab master pilot Ibn Mājid made reference to Ambohabé in his nautical instructions such as the *Hāwiya*. The Mankār site mentioned on the east coast may be equated to Ambohabé. The Egerton manuscript recounting the passage of the Portuguese captain Lopes de Sequeira in the Matatāña valley provides a pointer to this (see below).

Ambohabé was part of a series of minor ports or outposts located along the Malagasy coasts. Great vessels from abroad visited the main ports, in the northwest and the northeast of the island, while *antalaotse* and Malagasy merchants collected local products and redistributed a portion of the imports along the coasts and inland.

Malagasy Muslims were also likely to visit the Comoros and the East African coast (in fact, we do not know how far the *antalaotse* of the northwest and the Rasikajy of the northeast traveled). Ibn Mājid (fifteenth century) mentions relations connecting Madagascar, the East African coast and India: “At the beginning of this period [at the time when the easterly winds blow], a flotilla of ships from Qomr sails to the Zang, to Mrīma [coast, between 8° and 11° degrees south], Hormuz and the [west coast of] India . . . [The journey from Qomr to the East African coast] has two seasons: at the beginning of the *karws* wind . . . and at the end of the *karws* wind” (Ferrand, May–June 1919: 484–485). In the *Sufāliya*, Ibn Mājid writes: “The sea journey of the people from al-Qumr toward as-Sawāhil has two seasons” (Jouannès 2001: 96). One may wonder whether the myth of the *rukḥ* bird which carries an elephant in his claws from the mainland to Qumr Island refers to an ivory trade conducted by boats from Madagascar (see Jouannès 2001: 88).¹⁸ Elephant tusks have been unearthed in southwestern Madagascar, at Itampolo and in the bed of the Mandrare River (Grandidier 1905; *Bulletin de l'Académie Malgache* 1914).

Madagascar in Arabo-Persian Texts

A better idea of which ports Muslim merchants were aware of and visited along the coasts of Madagascar would remain unknown until researchers discovered the fifteenth-century nautical treatises written by Ibn Mājid (*Al-Urjūz as-sufāliya*, *Hāwiya*, *Kitāb al-Fawā'id* . . .)¹⁹ and the sixteenth-century treatises produced by Sulaymān al-Mahrī (*Al-'Umda al-Mahrīya*, *Kitāb al-Minhāj al-fakḥir*). These documents (from which several excerpts are given below) reveal that the Arab and Swahili Muslims possessed at least a superficial knowledge of the entire Malagasy coastline, but that they knew the north of the island much better than they did the south. Ibn Mājid and Sulaymān al-Mahrī, and later the Turkish admiral Sīdī 'Alī Celebi (1554) (who made use of Ibn Mājid's works), all mention twelve sites along the west coast and ten along the east coast, that appear to have been visited by ships (Allibert 1990: 160–163).

¹⁸ Note that the Italian navigator Pigafetta, who participated in Magellan's expedition in the South China Sea, heard of a place where a great tree grew which housed garudas, birds so large that they were able to carry away a buffalo or an elephant (Suarez 1999: 106).

¹⁹ See Khoury 1971; Tibbetts 1971: 432–435; Viré and Hébert 1987. See also Vérin, 1972: 94, 1975a: 89ff., 1986: 945; Allibert 1984: 21, 1990a: 155ff.; Jouannès 2001. The *Sufāliya* was written before 1488; the passage concerning Frankish vessels in the Indian Ocean is a later addition (Jouannès 2001: 38).

Cap d'Ambre, the northern tip of the island, was known as the "Cape of Salt," Ra's al-Milḥ. The *Umda* of Sulaymān al-Mahrī describes routes linking this cape to the East African coast and the Maldives:

You must know that between Ras al-Milḥ and the coast of the Zang, the distance is 50 zams [a 150-hour sail], and 20 zams [60 hours] east of Ras al-Milḥ there is an island called Munawwara [or Manūra, possibly one of the islands in the southern Maldives]. (Vérin 1975a: 90)

For the northwestern Malagasy coast:

- At 10° G. B. ("Great Bear is eight fingers high above the horizon"), the *Hāwiya*, *Umda* and *Minhāj* give the port of Langānī (or Lūlūjān or Lulangānī), in a "well sheltered" cove ("all these ports are dangerous to shipping except Langānī," notes Sulaymān al-Mahrī). The *Hāwiya* (v, 43, verse 133) mentions the town of Manzalājī, at the same latitude: it must correspond to Lulangane and Massalagem Velha in the Portuguese texts, in the Bay of Mahajamba, established on an islet and on the coast respectively.
- At the same latitude, the *Sufāliya* of Ibn Mājid also mentions Sa'da, a place that Sulayman locates south of Langānī: he successively notes Langānī, Sa'da, and Manzalājī, as Ibn Mājid had done in his *Hāwiya* (ix, 69). In this poem, Sada is located at "nine and half finger-widths." The Portuguese did find a village bearing this name, perhaps located in the Bay of Anorotsangana. The term may mean "fort" in the Antalaotse language, according to the *COACM*, 111, which derives it from an Arabic word *sadd*, "wall"; in fact, the Arabic language has *ṣadd*, or *sadd*, meaning "checking, stopping; a mountain; a valley."²⁰
- At "Great Bear at nine finger-widths above the horizon," the *Hāwiya* (ix, 69, verses 58–60) gives the name Anāmil, connected by Tibbetts with the Namela River, which is located much further south, in Maintirano. According to Viré and Hébert, however, "it is certain [?] that this Anamil precisely corresponds to the sizeable trading settlement of Kingany, at the mouth of the Bay of Boina" (1987: 76).
- At "nine finger-widths" again, the *Hāwiya* (ix, 69, verses 58–60) places Manzalājī, possibly another Manzalājī than the one mentioned along with Langānī. In the Bay of Boina, a town called Massalagem Nova by the Portuguese was created around 1600. Viré and Hébert have suggested *manzil l-lājī*, "refugee's station" or "immigrant's station" as an etymology for Manzalājī (1987: 69).

The contradictions revealed in these texts mean that even the coasts of northwestern Madagascar remained poorly known, a reality Sulayman al-Mahrī recognized:

The routes . . . [to the Malagasy coasts] have not been verified, due to the small number of voyages that have been made to this island, and due to insufficient nautical knowledge on the part of those who have traveled there. (Hébert 1999: 46)

- At "eight finger-widths," on the west coast, the *Hāwiya* (ix, 69, verses 61–62) indicates Bandar al-Nūb. Ibn Mājid places this at the latitude of Sainte-Marie Island. The connection suggested with Boina is conjectural (Tibbetts 1971: 433).

²⁰ *COACM*, 111: 260 n.1. On the locations of the various "Sada" mentioned by ancient authors, see Viré and Hébert 1987: 71; Richardson 1829: 817.

On the northeast coast:

- At 10° G.B. (“ten finger-widths”), according to the *Hāwiya* (IX, 69, verses 56–57), one finds Bandar Banī Ismā’il. Tibbetts, Viré, and Hébert suggest placing it further north, in the Bay of Antsiranana (Diego-Suarez), at Ramena, where Leguevel de Lacombe signals the existence of a site called Moncale-Antalotches, “port of the Antalaotres.”
- At 9° G.B. (“nine finger-widths”) lies Bīmārūh, the Bemaro of the Portuguese and the modern Vohemar. The Arab word can also be read as Bīmāriwuh, which may be related to the name of the Bemarivo River: Muslims settled in Bemanevika, at the mouth of this river. The identification with Vohemar, however, appears more likely,
- At 8° G.B. (“eight finger-widths”), Jazrat al-’anbar, “Amber island,” is probably Sainte-Marie.

Further south, identifications are all highly doubtful:

- At “seven finger-widths” (*Hāwiya*, IX, 69, verses 63–64), mention is made of Malawīni (or Malawīn) in the west, and Nasīm (“breeze”) in the east. For Tibbetts, the first site corresponds to Nosy Voalavo (“Rats’ Island” to the south of Cape Saint-André), and the second may be Foulpointe or Vatomandry.
- At “six finger-widths” (*Hāwiya*, IX, 69, verses 65–66), one finds mention of Bandar Si’bān, “Port with reefs,” on the west coast, which has not been located, and Mankār on the east coast, which may be Manakara, or Ambohabe, at the mouth of the Matatāña River.

Still further south, the texts show unexplained and unconvincing duplications of names:

- At “five finger-widths” (*Hāwiya*, IX, 69, verse 67), mention is made of Bandar Kūrī on the west coast, and Bandar Hadūda on the east coast.
- At “four finger-widths” (*Hāwiya*, IX, 69, verse 68), we have Bandar Qāsīm on the west coast, and Bandar Kūs on the east coast. Bandar Kaws or Kūs means “port of the southwestern monsoon.”
- At “three finger-widths” (*Hāwiya*, IX, 69, verses 69–70), Bandar Hayt or Hīt (cf. Arabic *hīt*, “lowland”) or Hant on the west coast, and Abaya on the east coast. Tomaschek and Tibbetts have read this term “Wabaya” and have connected it to the ancient name of Fort-Dauphin, Turubaya, mentioned by the Portuguese; however, Ibn Mājid locates Banday Hayt much further north. At this latitude, on the east, one finds mention of the Tīrī Rajā (or Ragā, or Rakhā) Islands, the Mascarene Islands.²¹ These islands, known to Arabo-Persian navigators, would not be inhabited until the seventeenth century.
- At “two finger-widths” (*Hāwiya*, IX, 69, verses 71–72), we find Timārūh on the west coast, and a second Bandar Hadūda on the east coast.

²¹ “In Persian, the expression *tīr-i rajā* means ‘arrow of hope,’ *rajā* being an Arabic word; in astronomy, *tīr* refers to Sirius and its rhumb. But it is not certain that this expression is of Persian origin; it may be that *rajā* . . . is Indonesian [or Indian]” (Viré and Hébert 1987: 70 n. 29).

- At 1° G.B. (“one finger-width”) (*Hāwiya*, 1x, 69, verses 72–73), Gubba (“Bay [of]”) Kūrī on the west coast (a Bandar Kūrī has already been mentioned further north); here, the name may refer to the Bay of Saint-Augustine), and once again Bandar Kūs on the eastern coast.

Moreover, a text from the Turkish Admiral Piri Re’is (1521), published by C. Allibert, provides data that was probably given by Arab or Persian sailors and drawn from more ancient texts:

This chapter [p. 70] describes the Kumur Islands.

- 1 There one finds a large island [Madagascar],
its name is Tinko, O lucky man,
- 2 The Franks call it San Lorenzo,
The Arabs call it Komor . . .
- 8 Know that their language is that of Mougliche [Mogadishu]
That of Tinko,
- 9 The natives call it Tinko
[p. 71] 1 The natives have no knowledge of its limits either . . .
[p. 72] 1 [people of the African coast] take away all its goods,
- 2 Know that its goods are sandalwood
The trees are tall on this island, they are burnt [for cultivation],
- 3 Black slaves are another of its goods,
The conquerors capture them by order of the Chah
- 4 The Sultan Adil bin Mohammad Khan is the Sultan of this island,
- 5 It has three towns, all large,
Their populations are all black, O lucky man,
- 6 The chief dwells in one of these towns,
One is called Saada, O wise man,
- 7 Lankasika, which is the capital, is famous
They all follow the Shafi’i school,
- 8 But they also have a population who lives far from the sea,
They are all black savages, O friend,
- 9 They do not know the holiness of the religion of all [Islam]
They are savages and listen to no one,
- 10 There are people in the population who capture them,
and sell them to the ships [that come]
- 11 They are busy capturing these people all day long,
[pp. 72–73]
- 1 The savages are divided into four groups, all black,
- 2 [The chief of] one of the groups is weak and the chief of another one is very strong,
The Chah of one of these groups is unknown . . .
- 4 In the mountains of this island, O friend,
there are many seven-headed snakes

(Allibert 1988b: 19ff.)

Piri Re's clearly indicates the existence of multilingualism on Madagascar: Swahili was spoken in ports, and Malagasy (called *tinko*, a term derived from ki-Tikuu, a Bantu language of the northern Swahili coast [Allibert 2012: 346]) elsewhere. Note that the name Tinko, in Grande Comore, refers to the *fe* founder of the sacred *silibo* enclave of Madjeweni (Blanchy, p.c.). Curiously, the town of Langany is called Lankasika. The "four groups" forming the "black savages" correspond to the four Malagasy kingdoms known to the "people of the sea" as living in the interior of Madagascar. This division may be linked to *Imerina efa-toko*, "Imerina of the four parts," an expression credited to King Andriamasinavalona during the seventeenth century. The mention of "seven-headed snakes" found in the mountains of the island should probably be connected to "Vazimba" and Betsileo beliefs linking kings and snakes *fañano* (see above).

Piri Re's later mentions "four islands all named Kumur," and he describes Madagascar and the Comorian archipelago as places where "slaves are bred":

[pp. 76–77]

2 I have mentioned five islands, they all have similar customs,
 3 They breed slaves as lambs and sheep,
 4 At times, one person owns a thousand of them,
 females and males are bred like animals.
 5 Believe it, their daughters and sons are continuously sold . . .
 6 Sea people arrive and carry them
 in their ships, they take them away,
 7 Know that they sell them in Yemen, O friend,
 They reach the port of Jeddah.

The text thus reveals the significance of the slave trade at the beginning of the sixteenth century.

The Last Austronesian Arrivals

While a trade recession in the Indian Ocean and throughout the world-system during the second part of the fourteenth century did affect Malagasy trading ports, in all likelihood, sailors and merchants from insular Southeast Asia reached these ports once again during the fifteenth century. Portuguese testimonies, on the one hand, and data from the Antemoro Arabico-Malagasy culture, on the other, shed light on these Austronesian movements toward the western Indian Ocean, driven by a trade revival occurring from the beginning of this century onward.

Portuguese Testimonies

During the sixteenth century, Portuguese sources signal Austronesian voyages along routes that had long been known, toward the Maldives, Calicut, Oman, Aden, and the Red Sea (Manguin 2011). T. Pires writes of Sundanese vessels sailing to the Maldives in six or seven days, to acquire slaves (the Chinese Ma Huan also writes at the beginning of the fifteenth century that it was possible to reach the Maldives, from Sumatra, in just

ten days).²² The Maldives have been described by Duarte Barbosa (early sixteenth century) and João de Barros (1563) as an archipelago extending from the west coast of India “all the way down to the coast of Sunda”; this description – taken from Arab texts – appears to reflect the existence of a maritime route running from western Java to the Chagos Islands, south of the Maldives (the Portuguese included the Chagos in the Maldives).²³ In 1505, the Portuguese *visó-rey* “ordered a ship to sail to ‘the Maldives Islands, situated sixty leagues away from the coast of India, to seize some of the many vessels and junks that were, for certain, sailing through there, from Melaka as well as from Sumatra, Bengal and other kingdoms south of the Equator’” (in Castanheda, quoted by Manguin 2011: 269). Barbosa signals that Malay vessels were sailing across the Indian Ocean, reaching Cape Guardafui, at the entry of the Red Sea. According to Valentim Fernandes (1507), “junks from Java used to sail to the Maldives to take slaves they bartered against rice” (Bouchon 1975: 46). A Maldivian tradition collected by the French navigator Pyrard de Laval, who was shipwrecked in the Maldives in 1602, appears to confirm an Austronesian presence in the Chagos as well as the significance of these islands: a ruler from Malé “tried with no success to conquer a remote island in the south bearing the name of Folovahi or Pullobay,” which corresponds to the Malay toponym Pulowai or Pulo weh, also the name of an island north of Sumatra (Manguin 2011: 270). This Maldivian ruler claimed to be “king of the seven islands of Pullobay” (Pyrard de Laval, ed. Gray 1887, I: 296, II: 496). Another Frenchman, V. Le Blanc, describes “a marvellous island beyond the Maldives in the south, called Polouis or Polouois, now deserted but previously ruled by a prince called Argiac, a powerful king [governing] many islands [the king of Ache]” (Pyrard de Laval, ed. Gray 1887, I: 297 n. 1). Pyrard de Laval mentions the friendship linking the kings of the Maldives and Aceh, who “exchanged letters and presents.”

Sulaymān al-Mahrī included the Javanese among the “masters of navigation” of the Indian Ocean, and Afonso de Albuquerque sent an envoy to the king of Portugal bearing “a fragment of a copy from a large map made by a pilot from Java, which included the Cape of Good Hope, Portugal, Brazil, the Red Sea, the Persian Gulf, the islands providing cloves, the maritime routes of the Chinese . . . and the interior of these countries.” This map was “well known” in the community of seafarers.²⁴

The first Portuguese written accounts of Madagascar mention the cloves that could be found there: in 1506, “two [Malagasy from Tanana]²⁵ told Ruy Pereira that there was an abundance of cloves there” (*COACM*, I: 19). The presence of cloves,

²² Pires, ed. Cortesão 1944, I: 169, also II: 367, 496ff., quoted by Manguin 2011. Cf. 1970: 149.

²³ Pires states that “the islands of Diva [Maldives] reach as far south as in front of Sunda, and they run along the whole of Sumatra on its western side, all the way up to Gamispolla [Pulo Weh, at the northern tip of Sumatra] and [from there] until Cananor” (quoted by Manguin 2011: 230). According to Manguin (2000a: 43), “the merchant ships of the Malays and the Javanese continued to ply the entire Indian Ocean, as far as Madagascar, until the fourteenth and fifteenth centuries; while they probably used a southern route . . . when sailing westward, they had necessarily to sail back through the northern Indian Ocean.”

²⁴ Ferrand 1918: 6, 10, 13. The Portuguese navigator Cabral discovered the Brazilian coasts only in 1500.

The mention of Brazil on this map can only result from an addition by the Portuguese copyist.

²⁵ Barros related Tanana (“village,” in Malagasy) to Matatāña, the name of a river in southeastern Madagascar. According to Thomaz (2009: 162–163), however, the Tanana reached by Ruy Pereira was not

notes Barros, was in fact due to the accidental arrival of a Javanese junk on the east coast of Madagascar (*COACM*, 1: 48). Another theory holds that at this time, ships from Sumatra or Java were still bringing spices and aromatics from the Indonesian archipelago to the western Indian Ocean, in order to sell them on the East African coast or in Madagascar. Ruy Pereira was told that “every two years two or three junks with ‘white men similar to us’ arrived on the other coast of the island” (Thomaz 2009: 163). In a letter to the king dated to 1507, João da Nova notes “they were ‘men in clothes,’ which suggests Chinese rather than Indonesians” (Thomaz 2009: 163). Other texts mention Javanese journeys to Madagascar. Thus Bras Braiã notes in 1540: “[With the winds from the Sunda Strait], in the past, some went to Saint Lawrence Island, and it is possible to sail there via this route” (Thomaz 2009: 172). While this voyage was intentional, a letter from 1561 mentions unintended trips: “Thus it occurred many times that due to these great currents, Chinese and Javanese junks sailing [in the Java Sea], became lost in this abyss and reached Saint Lawrence Island, which is mostly inhabited by these people.” “There is no doubt,” writes Diogo do Couto, “that [the Javanese] have sailed all the way to the Cape of Good Hope and that they have been in touch with the outer [i.e. eastern] coast of the Island of Sao Lourenço, where one finds many colored and Javanized indigenous people whom they say are their descendants” (Thomaz 2009: 178, quoted by Manguin 2011: 266).

The cloves which Ruy Pereira heard about were the source of the myth of a “New India” or of a “Taprobane Major” rich in cloves and other spices (Thomaz 2009: 171). The presence of cloves in Madagascar is still mentioned in the Miller Atlas (1517). This myth explains why Dom Manuel sent of a fleet led by Diego Lopes de Sequeira to Madagascar, in 1508. Sequiera heard that “the cloves that had been seen had come from a Javanese junk which, due to great storms, went astray and arrived in a port not far from this one, and that the cloves from this junk were disseminated throughout the country; this is what misled Tristão da Cunha.” “The people of this country, seeing that [cloves] were coveted by the Moors dealing with them, found that the fruit of a certain tree . . . had the same flavor as cloves” (Barros, quoted by Thomaz 2009: 175). The data collected by Sequeira would lead to “the downfall of the myth of the ‘New India’ and of the ‘Taprobane Major’” (Thomaz 2009: 175).

It is clear that Austronesians were still present in the western Indian Ocean during the fifteenth and early sixteenth centuries, although Arabs, Persians, and Indians dominated international trade. We have other evidence for Austronesian enterprises. The presence of the double coconut from the Seychelles in Indonesia is the result not only of Dutch, but also of Austronesian journeys: these nuts bear the name *pao jengki*, “fruit from the country of the Zeng” in Sulawesi. “In the legends of the Bugis cycle *The Galigo*, the *pao jengki* is a marvellous tree which grows in the underworld and that heroes sometimes encounter when they travel” (Lombard 1990, II: 30, 321 n. 152).

Matatãña, where Ruy Pereira had not gone, but the Bay of Saint-Augustin. Thomaz notes that the most reliable source for Ruy Pereira’s travel is a text from Bras de Albuquerque in his *Commentaries*.

Arabico-Malagasy Manuscripts from the Antemoro Kingdom

At the end of the fifteenth century, Muslims from Iharaña (Vohemar) settled at Ambohabe, at the mouth of the Matatāña River. With them they brought manuscripts written in Arabic characters which were periodically recopied; some of these have been preserved to this day. The Antemoro name them *sorabe*, “great writing” (perhaps in contrast to a small type of writing which might denote Latin script, or Malay script using Arabic characters). An original “Arabic” language has also been maintained, essentially in the Anakara group, which uses it as a secret language. The complexity of the sources of this language has been demonstrated; it contains terms of Arabic, Persian, Swahili, and Malagasy origin (Beaujard 1998b). These *sorabe* clearly reflect Indonesian influences. The word *kitsary*, referring to the days of lunation, is indeed to be compared to the Malay *kitar*, “to turn, to follow one another,” *kitaran*, “turn, orbit, revolution.” This is a loanword from *written* Malay: the Antemoro read the Arabic *tāʾ* (third letter of the Arabic alphabet) as *ts*; moreover, the presence of the ending *-ry* can only result from a reading of the *r* (in a word inherited from the Proto-Malayo-Polynesian or an ancient loanword, the *-r* endings have become $\emptyset$ and *-na* or *-tra* [or *-tsa*], respectively, in Malagasy).

In astrology also, N. Rajaonarimanana (1990, 111: 88ff.) has pointed out the influence of Indo-Malay ideas in “predictions” featuring the divinatory “dragon” *hena be* (“big fish” or “big serpent,” also named *zoresy*, a term deriving from the Persian *jarašāʾi zar*, “small golden bells,” denoting the stars [Beaujard 1998b: 147]) mentioned in some manuscripts and by Flacourt during the seventeenth century in Anosy. As is the case in the Antemoro country, in Java, snakes indicate favorable directions for day, week, month, and year (Geertz 1960: 32). For an eclipse of the moon, the Antemoro use the expression “moon eaten by Rao,” which refers to the *asura* Rahu, eater of the moon in Indian traditions. This may have been borrowed from the Zafiraminia. This expression was known in Anosy during the seventeenth century. One finds it in Indonesia, for example among the Maanyan of Kalimantan. It may therefore have come from insular Southeast Asia. Moreover, outside the religious domain, J. Dez (1981: 89) has signaled the Malay *perahu*, “ship,” in a *sorabe* manuscript; this word is unknown in the Malagasy language.

Adelaar has put forward the hypothesis of a Southeast Asian origin – perhaps Javanese – of the Antemoro script system; this appears to be confirmed by the etymology of *kitsary* mentioned above (Adelaar 1995a: 337–339). It may be better, however, to speak of a Southeast Asian contribution to the elaboration of the Antemoro script. The sub-dotted *dāl* and *ṭāʾ* of the *sorabe* are also found in Pegon (Javanese Arabic script), in which they transcribe the retroflexes *ḍ* and *ṭ*. Note that Old Malay also included these retroflexes (in Sindhi, likewise, the retroflex *ḍ* is represented by a sub-dotted *dāl*). The velar *ṇ* [ɳ] is represented by the letter *ʾayn* in *sorabe*, and by the same character with three dots written above it in Pegon and Jawi (the Malay script). In words borrowed from Arabic, the *ghayn* (=g or ng in *sorabe*) is often pronounced [g] in Malay. *Sorabe* and Jawi use the *fāʾ* (topped by a *shadda* in *sorabe*, by three dots written above in Jawi) to express the sound [p], whereas in northwestern Madagascar, [p] is conveyed by the letter *bāʾ* with three underwritten

dots, as in Swahili. Moreover, Adelaar has noted that the word *soratra* with the meaning of “writing” is probably a Malagasy loanword from Malay (see also Munthe 1985: 59).²⁶ With this word *soratra*, Antemoro aristocrats use metaphors such as “mothers of writing” (*reny soratra*) for the main letters, and “children of writing” (*zana-tsoratra*) for diacritic marks; these metaphors are also found in Batak and in Bugis (Dahl 1983: 71 n. 7; Adelaar 2003). Note, however, that sub-dotted *dāl* and *ṭāʾ* are also found in manuscripts from South Arabia and Iran.²⁷

Some data in the field of religion, found specifically among the Anakara group (who specialize in knowledge of the sky) suggest either an Indonesian origin or heritage. Sometimes called “New Year,” the annual ceremony of “adjustment of the year” (*mandrafi-taonia*, *mandrafitra* meaning in Malagasy “to adjust, to make coincide, to do carpenter’s work”) performed in Adalo (the tenth month), therefore before the beginning of the year (which occurs at the new moon of the month Alahamaly, March–April), is similar to the “annual festival” *nepuk ta’un* of Pasir (eastern Kalimantan) and the Balinese Nyepi, “New Year,” which also occurs during the tenth month (Goris 1960b: 119ff.). The Nyepi is less a festival of renewal than a ceremony of purification and of protection against underworld spirits. On the first day of the festival, offerings are made at crossroads for the spirits of the world above and for those of the underworld. The Anakara *mandrafi-taonia* also primarily involves driving out demons by knocking one’s fists against the walls of houses. Throughout Madagascar, crossroads are associated with spirits of the underworld. This is true also in Zanzibar for Nairuzi (from the Persian Nawrūz), or the first day of the year, when people place the ashes of extinguished fires at crossroads (Freeman-Grenville 1993: 1050).

The question of a Malagasy Zaframinian and an “Indonesian” heritage arises from the facts that have been set out here (the Zaframinia preceded the Muslim Antemoro in the Matatāña region). The data assembled also doubtless refer to migrations and to transfers of knowledge throughout the Muslim world, within an Indian Ocean context. The complexity of sources of the Arabico-Malagasy way of speaking and of the *sorabe* manuscripts ought to be linked to the apparent complexity of origins of aristocratic groups and to syncretic phenomena which intervened at various times. However, the “Indonesian” inheritance which has been emphasized applies to the Anakara group, first of all. This may be connected in part with late Indonesian arrivals in northern Madagascar, movements that would be halted or slowed by the Portuguese seizure of Indian Ocean commerce during the first half of the sixteenth century.

Moreover, arrivals within the context of Mojopahit trade may explain the presence of late Javanese loanwords in the Malagasy language, as well as that of the eastern Indonesian term *taho*, “taro.”

²⁶ The term *soratra* with the meaning “colored stripes” (southeastern coast of Madagascar) was probably borrowed from the Javanese. “The Javanese term *surat*, however, is of Malay origin (according to its phonology)” (Adelaar, p.c.).

²⁷ Faublée 1970: 280; Dez 1983: 8. Shedding light on parallels with Oman, O. C. Dahl has refuted the alleged links between Arabico-Malagasy script and Jawi script; according to Dahl, the Jawi script was influenced by the Persian writing system. His arguments have been discounted by A. Adelaar (1995a: 339–341).

Coasts and the Interior: Relationships between Regions

The Highlands: The Development of Fortified Villages

The rise of coastal cities and trade was inseparable from population growth in the Highlands, where new villages appeared: these became centers for chiefdoms that were in contact with the coasts. The period following the Fiekena Phase in Imerina saw the creation of fortified villages located on hills and encircled by ditches (Antanambe, and later Ankatso and Angavobe Phases). This choice certainly resulted from new political data and was a consequence of increased insecurity linked to the slave trade. R. Dewar and H. Wright (1993: 447) note the appearance of hierarchically organized settlement clusters during the fourteenth century. Using aerial photographs, A. Mille (1970) has identified more than 16,000 fortified sites in the Antananarivo region (within a 100 x 110 km zone); they are dated to between the fifteenth and nineteenth centuries.

Burney (1987b) has highlighted environmental changes in the Itasy region around 1400 CE that were probably linked to demographic growth and perhaps to the arrival of new population groups. Various traditions have led A. Délivré to place the arrival of the first aristocratic *andriana* groups in Imerina from the east coast during the first half of the fourteenth century; these groups would repel the ancient “populations” (called Vazimba – from the fifteenth century onward?), and either dominate the first political entities, or live side by side with them.²⁸ As Dewar and Wright correctly point out, “Such traditions may disguise considerably more complex processes in which a few groups move, while others change allegiance and adopt new material patterns symbolizing new allegiances” (1993: 448). There is no break, in fact, between the Vazimba and *andriana* periods. The Vazimba kings were already the bearers of an indianized Austronesian symbolism, blended with elements of African origin. Women probably played an important role, as was the case in Southeast Asia: the mention of the Vazimba queens Rangita (“The kinky-haired Venerable”) and Rafohy (“The Short Venerable”), beyond metaphors and mythical meaning, probably also reflects a social reality. New Austronesian influences, however, seem to have taken place, mainly from – or influenced by – the Javanese kingdom of Mojopahit.

Pottery reflects this new situation. “Antanambe ceramic assemblages show changes which may be responses to increased social complexity. Low-necked jars are larger and have a range of impressed triangles and incised motifs arranged in shoulder bands. Graphited bowls are also larger and have more complicated rims and panels of impressed decoration. Some vessels have pedestal feet, clay copies of the feet found on east coast chlorite-schist basins” (Dewar and Wright 1993: 447).

While the period prior to the fifteenth century, in the Highlands, reveals little difference between aristocratic sites and other sites, the situation is different from the fifteenth century onward: by then, space was structured by social organization and beliefs about power. Sites that were inhabited by aristocrats are characterized by the construction of an elevated esplanade at the top of the village (*rova*, later a fortified royal complex); the planting of *Dracaena* (*basina*) and *Ficus* trees (a practice also known in the Betsileo country, in the Ikongo region, and in Anosy); the presence of water, the

²⁸ Délivré 1974: 233, 396 n. 157; Domenichini 1978. See below.

existence of tombs within the grounds of the site (small wooden houses would later be built on the tombs of the kings or princes of high rank); and the presence of a small forest called “the prince’s forest.” The footings of the royal houses show carefully carved stones (Rafolo 1994: 98, 101).

The link between altitude and royal power recalls continental or insular Southeast Asia, where the divinized ancestors reside on mountains. The association of the king with the zenith of the universe was clearly demonstrated in Java (cf. the title “kings of the mountain” for the Sailendra kings). We shall return to the symbolic association between the king and water. The practice of planting a *Ficus* at the center of a royal site, as well as the vernacular names for these trees express legacies from the Indonesian world (they are native *Ficus*, bearing names of Austronesian origin). The spatial symbolism that is evident in aristocratic sites from the fifteenth century onward also reveals a connection between the north and political power: ideally, the king’s palace is built in the northeast, with the south seen as a direction linked to servants. This symbolism is still effective today at the village level and for house interiors in most of Madagascar, except in the southwestern region (the symbolism of the cardinal points, the preeminence of the northeast, and their Indonesian origin have been described in the discussion about the Zafiraminia above).

The Malagasy Highlands exported oxen and slaves, and perhaps silk fabrics; these exports were controlled by the elites, who acquired luxury goods such as East Asian ceramics. The development of silk manufacture is likely to have been related to the introduction of the pigeon pea from the East African coast (see above): the pigeon pea was used for feeding silkworms. Links were established with the trading ports of the northwest. Traders from these ports brought textiles, weapons, beads, jewelry, and ceramics along with new knowledge and practices: they seem to have been accountable for the introduction into the Highlands during the fifteenth or sixteenth century of the Arabic names for the days of the week; of the lunar calendar using Arabic names of the Zodiac signs;²⁹ of the institution of markets named in connection with the days of the week (a practice known in South Arabia and in other Islamic countries); of systems of weights and measures (Hébert 1989–1990); and of the name “Vazimba” to describe “autochthonous” inland populations. Mayeur (1777) writes:

In these *tseñas* [markets], one usually finds all the products of this great island, and even many goods imported from India by Europeans and Indians from Surat. They purely and simply practice barter trade with the natives of the country, they do not use much money in trade, except some fragments of silver, that the Hoves weigh by dividing the piastre.

Among the products traded, he mentions:

cotton, bark and indigo used for dyes, . . . marine salt from Mouzangaye [Majunga], salt from wood, sheep, chickens . . . , ceramics and loincloths of all kinds, silver and copper jewelry, coral, cotton fabrics and silks from Surat, tin, yellow copper, red clothes . . . The slave traders are almost the only ones who employ the piastres that the Europeans spread each year in Madagascar; and it is noteworthy that of a total of the nearly 120,000 piastres brought in by

²⁹ This calendar replaced the calendar of Sanskrit origin (see below).

our trade each year, the Arabs deftly reap most of this on the Indians' behalf. The rest of it is used in transactions, or is converted by the natives into jewelry of low quality, that the Arabs still collect in exchange for textiles, etc.³⁰

Some names for markets recall the presence of foreigners, thus Alatsinainy Ambazaha, "The Monday of the foreigners." While the markets of the fifteenth century were probably not as large as the "tsenes" described by Mayeur and of course they did not use piastres (although other currencies may have been used), the products traded and the merchants' activities may have been quite similar.

The most significant site in Imerina for the Antanambe phase is that of Ambohidahy, perched on the Mangabe mountain range, 18 kilometers north of Antananarivo. This site has yielded remnants dated to between the fifteenth and sixteenth centuries.³¹ Surrounded by multiple ditches, Ambohidahy covers 4.6 hectares, and is divided into two parts, the larger of which is the southern one. Excavations have revealed houses on terraces, as well as tombs made of small slabs arranged horizontally. The locations of the tombs and their various features "reveal social differentiation" (Kus and Wright 1986: 54). The size of the site, the presence of tombs, and the discovery of Chinese celadon (dated to between the fourteenth and sixteenth centuries) indicate the importance of Ambohidahy in the regional hierarchy.

Other sites belonging to the same period have been discovered in southern and eastern Imerina. The village of Ambohimananana has revealed an occupation during the fourteenth and fifteenth centuries with ceramics differing from those of the first period. Bowls with graphite coating and high conical pedestal bases similar to those found at Fanongoavana appeared during the fifteenth century (*loviamanga*, "black plates").³² Flat-bottomed bowls with "bracket-shaped" walls have been found; they are known at Ankadivory and also in Androy dated to the twelfth century (Andranosoa and Beropitike). Ceramics came from workshops located north of Antananarivo, and may have spread into Imerina via regional markets (Rasamuel 2001).

In the Vakinankaratra, the fortified site of Vohimasina overlooking the Manandona valley is dated to between the late thirteenth and sixteenth centuries. The site, covering 1.2 hectares, shows ditches on its west side, and "terraces with houses and tombs in stone disposed in a row" (Wetterstrom and Wright 1992: 155). Excavations have yielded local ceramics in the form of bowls and jars, decorated with "incised lines and imprints of small triangles, sometimes bearing traces of graphite" (Wright *et al.* 1992: 129); these ceramics resemble those of the Antanambe Phase of the Antananarivo region. The only imported item discovered is a single "Indian red" glass bead.

In the Moramanga basin, sites along the Mangoro River have yielded ceramic ware similar to that found in Anosy for the Ambinanibe phase (Ramilisonina 1993; Dewar and Wright 1993: 447).

³⁰ Mayeur 1913: 43–44. Traditions date a market in Ankay (eastern Imerina), to the "Vazimba period" (Hébert 1989–1990: 83).

³¹ Wright *et al.* 1992: 131–132. A shard has yielded an older dating: 1100±190 CE (*ibid.*). See also Wright 1979; Kus and Wright 1986: 53–54, fig. 3.

³² As mentioned, the adjective *manga* may also refer to an idea of excellence, or to trade with the Swahili coast. The *loviamanga* are found on many sites dated to between the fourteenth and eighteenth centuries (Rasamuel 2000: 8).

In Imerina, the Ankatso phase continued the Antanambe phase (Dewar and Wright 1993: 447). Decoration on pottery here includes zigzag lines, and bands with patterns evoking basketry (see Wright 2007: 49). “All bowls exhibit traces of graphite coating” (Wright 2007: 49). The Angavobe phase, seems to have been partly contemporaneous, although curiously, no site dated to the Ankatso phase shows ceramics from the Angavobe phase, and vice versa. “It is possible that the two phases were contemporary material manifestations of different social groups” (Kus and Wright 1986: 56; Dewar and Wright 1993: 448). The total surface area of the Ankatso and Angavobe sites that have been discovered is smaller than that of the sites from the Antanambe Phase. This reveals a stagnating population, probably due to more frequent conflicts; these conflicts are also reflected in sites that by this time tended to be located at higher altitudes (initially an elevated site implied a connection to the sacred). The ceramics of the Angavobe phase include graphite-coated, polished, shallow hemispheric bowls, each with a high conical foot. During the Ankatso Phase, “one observes a marked differentiation of the tombs at some sites or groups of sites, thus reflecting” social inequalities within communities. It was during this phase that “a large number of sites traditionally linked” to the early period of the Merina dynasty appear to have been founded (Rakotoarisoa 1994b: 30).

Fanongoavana, located in eastern Imerina, is the most significant site representing the Angavobe Phase (late fourteenth–fifteenth century). The village was enclosed by both an internal (0.73 hectare) and an external ditch. Within the site, Rasamuel has found terraces, platforms for houses, enclosures for cattle, pits (silos), and the tomb of the site’s founder, known by tradition under the name “Andrianamponga.” Tombs built with stone slabs have been discovered both in the enclosed area and outside the ditches. In the area enclosed by the inner ditch, the stone footings of four wood-frame houses have been discovered (as would be the case later in Imerina, each house has a hearth in its northwestern corner and a door in the southwest); also found were installations for obtaining clay, firing pottery, and smelting iron (Wright 2007: 38). Rice was present, as well as *Vigna unguiculata* and other undetermined Fabaceae (Rasamuel 1984b: 151–154; Wright and Wetterstrom 1992: 157). The *Tantara ny Andriana* gives Andrianamponga, etymologically “Lord of the rice” (from the Swahili *mpunga*, “rice plant, paddy”), as the name of a Vazimba chief in the ninth or tenth generation prior to Andriamanelo. Andriamanelo reigned at the beginning of the sixteenth century (Délivré 1974: 234), which would place Andrianamponga during the fourteenth century, a date that is too early, when compared to the excavations’ results.

In western Imerina, the site at Lohavohitra is a significant set of fortified villages built on a promontory overlooking the Vonizongo region. This site benefited from substantial collective achievements such as earthworks, enclosures built of dry stones, pits for oxen, and water tanks. Stone footings for houses have been unearthed. On the highest northern site, excavations have shown the presence of individual or collective tombs, with chambers delimited by slabs. Externally, the tomb covers feature dry, squared stones. Water sources were protected by a form of dry stone coping (Rafolo 1989–1990: 65; 1994). Along with their utilitarian function, these sources were probably sacred, as observed to this day at many sites in Imerina (Rakotomalala *et al.* 2001: 168ff.). The remains of installations for collecting wastewater were found. Dated to

between the sixteenth and eighteenth centuries, the site has yielded fragments of footed bowls with graphite coating, and shards of high-necked jars similar to others dated to early periods at Fanongoavana and Angavobe (Wright *et al.* 1992: 136). Carbonized rice (of the *indica* and *japonica* types) has been retrieved, as well as remnants of cowpea and Bambara bean *V. subterranea*. Near Lohavohitra, the site at Babay has yielded blue-and-white Chinese porcelain that may be dated to the fifteenth century (Radimilahy, p.c.).

A group of sites has also been discovered at Ambohitrikanjaka on a ridge northeast of Antananarivo, with terraces, stone footings for houses, and tombs. Its ceramic decorations recall assemblages from Ankatso. Only one dating (380 ± 90 BP) is available for this site.³³ Located on a high hill in eastern Imerina, Angavobe also reveals a complex set of ditches and terraces.

Other sites may go back as far as the fifteenth century: these include Ambohipanombo, in Imamo; Analamanitra, in the Avaradrano; the royal site of Ambohimanga; and the *rova* at Antananarivo. Analamanitra appears to have specialized in stockbreeding (Rasamuel 1988), as many cattle and pig bones have been found there (pigs were also eaten at Ambohimanga). This village shows a local variant of the graphited *loviamanga* bowl, with decorated foot, also known at Vohitrondriana, at Lake Alaotra. Analamanitra is a site unmentioned in Merina traditions. As is the case in Ambohimanga, Analamanitra shows no stone footings for houses; this absence confirms that it was not a site inhabited by aristocrats. At the *rova* of Antananarivo, a sampling in its southern zone has recently yielded a dating of 1450 ± 95 CE (Rasoarifetra 2009). Pottery of the Antanambe type (fourteenth–fifteenth century) has been excavated in the center of the *rova*.

Anosy

By the end of the Ambinanibe Phase, some sites in Anosy (Efangitse and Ampasimahanoro) were fortified with ditches and fences; other fortified sites appeared on hilltops. The many village communities show social stratification. The new organization and insecure climate reflected in these changes seem to have been due to the intrusion in Anosy of Zafiraminia from the southeast, displaced by the arrival of the Muslim ancestors of the Antemoro aristocrats in the Matatàña valley, by the late fifteenth century (Rakotoarisoa 1994a: 83–84) (see below). These Zafiraminia would coalesce into a dominant aristocracy in one region in Anosy; accounts of traditions collected by Flacourt during the seventeenth century state that this region had previously been ruled by the enigmatic Voaziry (see above).

At this time, the major site in Anosy was Fanjahirambe (7.5 hectares). Called “Fanshere,” capital of the Zafiraminia kingdom, by Flacourt, it was set on a terrace above the Efaho River and protected by ditches. Another significant site was Tranovato, from the name of the “stone house” (wrongly called “Fort of the

³³ Rasamuel 1982; Wright *et al.* 1992: 135. The earliest pottery may date to the late fifteenth century. Ochre and graphite coatings are rare.

Portuguese”) built on an island in the river’s mouth. This “house” appears to have been erected prior to the arrival of the Zafiraminia.

The main villages were built near rice fields (Flacourt points out the importance of rice cultivation for the Zafiraminia nobility). These villages were surrounded by smaller villages and hamlets, probably inhabited by communities of lower rank (Wright *et al.* 1993: 81).

For this phase, termed the Tranovato phase, three types of pottery have been unearthed. A very fine type of pottery has been found at the major sites, featuring graphite-coated bowls, often decorated with bands or panels of triangular imprints. The bowls showing the most elaborate decoration have been found only at Fanjahira and Tranovato. This kitchenware was probably used by high-ranking figures only (Wright *et al.* 1993: 77, 81). Tranovato was certainly a royal residence, as shown by the presence of a nearby cemetery called by Flacourt “the cemetery of the Great people of Fanshere.” One also finds basins, often decorated with triangular impressions, and bowls without graphite, imitating celadons. A second type of pottery, which was coarser, includes spherical jars with incised parallel lines combined with zigzag oblique patterns (recalling the Ambinanibe Phase); others show wavy lines, perhaps done with a shell, or a dot motif known from a previous phase (Rakotoarisoa 1998).

At Tranovato and Efangitse, these ceramics were found in association with Ming celadon and blue-and-white porcelain, dated to the sixteenth century or later. Shards of chlorite schist reveal links with the east coast; Flacourt would mention these later.

The pottery decoration of the Tranovato Phase recalls Androy sites, and has parallels in other regions of Madagascar (Heurtebize and Vérin 1974: 140; Rakotoarisoa 1998: 85). Spherical jars with wavy combing were known on the northeastern coast during the thirteenth century (Vérin 1975a: fig. 304–305; Wright and Fanony 1992: 41 fig. 7). Their appearance in the Anosy region agrees with traditions mentioning migrations along the east coast. Bowls and basins with graphite coating and triangular impressions were known in the Highlands during the thirteenth century, and were present in many regions of the island during the fourteenth and fifteenth centuries (Highlands, Kingany, Rezoky, Bekatrafay . . .). The spread of this type of pottery, associated with that of imported ceramics, seems to have reflected increased exchanges among emerging local elites (Wright *et al.* 1993: 78).

The South

While for a previous phase the Androy sites have yielded ceramics similar to those found at Rezoky, more recent levels of these sites show pottery of a new type: it corresponds to the Bekatrafay/Tranovato phase (sixteenth–seventeenth century), and includes bowls of fine pottery with triangular impressions and graphite coating.³⁴ Motifs on shards found at Bekatrafay, south of Andranosoa, are similar to those on ceramics seen in Imerina until the seventeenth century. The sites show continuity with the previous period: changes in pottery style do not reflect population change. At Bekatrafay, celadon has also been discovered (Radimilahy 1981; Pearson 1997).

³⁴ Vérin and Heurtebize 1974; Heurtebize 1986b: 174; Pearson 1997: 240.

East of Bekily, a large enclosure (*manda*) (over 800 meters at its greatest length), called “the enclosure of Ramananga,” and delineated by a wall 2 to 3 meters wide and of the same height, has yielded shards of “false celadon” from western Asia; this has led researchers to date the site to the fifteenth–sixteenth centuries (Emphoux 1981: 92). Areas demarcated by small walls in the center of the enclosure correspond to houses. The inhabitants of this *manda* obviously had contacts with long-distance trade networks, as had been the case during previous centuries.

The West: Africans along the Malagasy Coasts

The sites of Rezoky (thirteenth–fifteenth century) and Asambalahy (fourteenth–sixteenth century), already mentioned, reveal the arrival of Africans on the western Malagasy coast; these groups were herders and smiths, and practiced hunting. These sites had connections with trade in the Mozambique Channel, as shown by the discovery of ceramics from the Muslim world (Rezoky, and Asambalahy) and China (Rezoky).

In Isalo, the site at Teniky, called “Cave of the Portuguese” has also yielded imported ceramics, dated to later than the fifteenth century. Inside, the ruins of walls recall Muslim stone constructions, with cut “briquettes,” whose dating remains uncertain.

Documents dated to the sixteenth and early seventeenth centuries reveal the presence of populations of African origin on the western Malagasy coast, who – at this time – were speaking a language different from Malagasy. The Portuguese describing the arrival of Tristão da Cunha’s fleet in 1506 portray Sada as a village populated with Cafres (see below). This term derives from Arabic *kafir*, “unbeliever,” and is used to refer to the people speaking a Bantu language who are described in Portuguese texts on Madagascar. Following a first visit in 1614, Luis Mariano writes:

The entire coast between Mazalagem [Bay of Boina] and Sadia [or Sahadia, at the mouth of the Manambolo River, or of the Tsiribihina River, in the Sakalava Menabe country],³⁵ some 130 leagues in length, speaks a language analogous to those of the Cafres, that is to say the language of the countries of Mozambique and of Malindi, while the inhabitants resemble in pigment and in culture the Negroes from Africa from whom they apparently derive. But, in the immediate hinterland of this coast, as well as in the interior and other coastal sections, only the Buque language is spoken, one quite special to local inhabitants and totally different from the African tongues and very similar to Malay, which proves almost certainly that the first inhabitants came from the ports of Malaka. (*COACM*, 11: 21–22; Kent 1970: 71)

Mariano notes later (1616) in a letter:

Although the language [spoken along this coast between Boina and Sadia] belongs to the same family as that of the Cafres of the Malindi coast, it is significantly different, as it is much richer. (*COACM*, 11: 225)

Toponyms, as well as some terms given by Mariano, are clearly of Bantu origin. Thus, the coastal line between Sadia and the Bay of Boina was called “the Bambala

³⁵ Grandidier has suggested the Manambolo River, which has also been proposed by Dewar and Wright (1993: 450). P. Vérin and other authors instead place Sadia on the Tsiribihina River.

coast.” The son of the chief of Sadia was named “Luquexa,” which corresponds to the royal title *lukwesa* later found in Africa among the Kazembe (eighteenth century) or the Lunda (Kent 1970: 72).³⁶ It was among this population of Cafres that Mariano described phenomena of possession (using the term *afô*, “fire” in Malagasy, which in fact refers to the spirits of the dead) and the confection of relics, which “the elderly sons of noble families [at Sadia] enclose in ugly small boxes that they wear always on them . . . at war and during feasts.” Mariano adds:

[These Cafres] use wooden images to feature their gods and their *afô*; these images are without shape and are as ugly as the men that they are supposed to represent; they decorate these with glass beads and other crude jewelry; they wear them at the neck fastened to a kind of sling. In time of war, or when they undertake a perilous journey, the owners of these charms have them first coated with fat. According to a general practice, the oldest son [in the noble families] cuts his father’s beard and nails when he dies, and places these relics, invaluable to him, inside these figurines; at times, he wears them directly fastened to the sling. (*COACM*, II: 228, 229, 233)

Mariano’s and Azevedo’s stay at Sadia gives us the first description of a “Cafre” kingdom along the Malagasy coasts – an accomplishment that has not been highlighted sufficiently. The king does not appear to have wielded much political authority. Mariano mentions the importance of the diviner-priest *maganga* (Swahili *mgānga*, id.); this “function is always fulfilled by a prominent personality, either the king, or one of his close relatives” (*COACM*, II: 230). This African population was barely affected by Islam. Mariano describes an expulsion procedure for evil spirits involving a procession of “people banging on the walls of the houses.” A similar ritual has been noted among the Antemoro Anakara, called *manao taika* (“to perform the *taika*”), when “the year is hot” (bad) (*taika*, “far away,” from the PMP **tasik*, “sea”). The Africans of Sadia had relations with both the Malagasy of the hinterland and the “Moors” of the north-western coast. Azevedo notes that the circumcision ceremony was adopted from the “Bouques” (*COACM*, II: 244). This African coastal fringe would apparently be absorbed by Bouques’ chiefdoms or kingdoms during the seventeenth and eighteenth centuries. These data invalidate the previously widespread opinion holding that ancient African immigration was primarily linked to a slave trade (Poirier 1979). On the contrary, as Kent (1970: 70) notes, the Malagasy were carried away by Arab and Swahili ships.

In the western Malagasy region, it is likely that part of the Vazimba clans had an African origin, for example the bilingual Vazimba with whom the Englishman Drury lived, at the beginning of the eighteenth century, at the mouth of the Tsiribihina River, or those who occupied the Baly hinterland and were defeated during the eighteenth century by Andriamandisoarivo, the first king of the northwestern Sakalava dynasty (Vérin 1975: 109).

Many written sources have wrongly approached the Vazimba question by using “ethnicizing” models or by accepting without historical criticism the traditions

³⁶ The denomination “Sukulambe,” given by Mariano to warriors of the west coast, has been connected to the name of an African group established in the Upper Zambezi valley, the Shukulumbwe (Ferrand, quoted by Molet 1972: 342); from Sukulambe comes the name of the Sakalava.

published in the *Tantara ny Andriana* of Imerina. The inhabitants of the Highlands designate ancient populations and the spirits of the earth and water under the name Vazimba; for J.-P. Domenichini (1978), however, this term first referred to ancient princes of the country. P. Vérin has connected the name Vazimba, of Bantu origin, to *vanjimbo*, a term used by the Swahili along the Kenyan coast to designate inland populations living under primitive conditions. During the early eighteenth century in northwestern Madagascar, the pirate Cornelius wrote that the *vanjimbo* “are the lowest caste on the entire island.”³⁷ Quoting Avelot (1912), P. Poumailloux notes: “in Nyanja, the name *zimba* refers to highlanders, and by extension, it means ‘wild people, not very civilized’.”³⁸ It is likely that this meaning is linked to the name “Zimba” which has long been applied to various East African populations. One already finds the name “Agisymba” or “Agizymba” in Ptolemy (book I, ch. 8), referring to a region of “Inner Ethiopia” west of the Mountains of the Moon; this name Agizymba may be connected to the name *kizimba* from a Bantu language of the lower Zambezi region. The Zimba belong to the Malawi people northwest of Tete. During the sixteenth century, “Zimba” left the lower Zambezi and ravaged the coast, capturing Kilwa around 1587, and later Mombasa (Poumailloux 2001: 116; Vernet 2005: 113).³⁹ In Madagascar, Vazimba appears to have been a term – introduced from Africa – given by the swahilized inhabitants of the trading ports to hinterland populations with unsophisticated lifestyles. The origin and meaning of the word Vazimba do not necessarily express an “Africanness” on the part of the ancient Merina nobility.⁴⁰ The name Vazimba, however, does reflect East African influences that were introduced via the western or northwestern coast of Madagascar; it expresses syncretisms which probably characterized Highland societies very early on. The existence of places called Vohibazimba, “hill [or village] of Vazimba,” along the southeastern coast, does not imply an ancient presence of people bearing the name Vazimba; it reflects the arrival of Muslim populations from East Africa on the eastern Malagasy coast: once again, here, this African term was applied to inland groups. Moreover, Hébert (1958) has suggested a connection between the name Vazimba and the Malagasy *ziva*, “joking kinship”: the Vazimba may refer to inland populations with whom newcomers built “joking relationships,” a hypothesis which may be consistent with the preceding explanation.

Comparative anthropology provides some interesting insights into African influences, although these influences are difficult to situate in time. Some cultural features, limited to particular regions of the island, probably resulted from inflows coming later than the first arrivals from the Swahili coast: these contributions spread from west to east and included the worship of royal relics; possession by *tromba* spirits; the elaboration of *sampy* fetishes; and the institution of “royal servants.” In nearly all of the island, the name for a charm container is *mohara*, a term linked to Shona *muhara*, “sheath.” Cultural transactions between East African and Austronesian representations,

³⁷ Grandidier 1908: 158 n. 2; Vérin 1972: 64; Prins 1961: 16. The term Vazimba does not derive from the Proto-Bantu *-*diba*, “lake” (G. Philippson, p.c.).

³⁸ Poumailloux 2001: 119. Poumailloux signals that Zimba is also the name of a subdialect of the Zezeru, a language belonging to the Shona group. Moreover, the Chewa from Mozambique were called Zimba.

³⁹ In fact, the marauders included not only Zimba but also men from other groups.

⁴⁰ By contrast, part of the groups from the west calling themselves Vazimba, are probably African in origin.

however, can be seen throughout the island within politico-religious structures. This type of encounter has led to various syntheses, according to region.

Throughout Madagascar, customs relating to death express links between the aristocracy and water spirits. The funerary rituals for the Vazimba, Sakalava, Merina, Betsileo, and Tañala aristocrats, including immersion of the corpse or parts of the corpse – sometimes placed into a boat-shaped coffin – in a lake or a river, and the belief in the reincarnation of a dead prince into a serpent, eel, or crocodile, reveal complex syncretisms between the East African and the Austronesian worlds; these syncretisms probably took place on both sides of the Mozambique channel. Parallel developments cannot be ruled out, so universal are some of the themes used in myths and rituals.

The funerary practices of the Betsileo kings, involving the collection of a maggot, can be compared to African rituals from Burundi and the Shona country. In the Betsileo country, the maggot is left in the tomb, or placed in a waterhole; this maggot is supposed to turn itself into a python *fananina* (Beaujard 1991). Mondain (1904: 107) has reported the collection of the liquids from the corpse and the transformation of the soul of the dead into *fananina* in a Vazimba group living in the Manambolo valley (West Malagasy). *Fananina* can be compared with Ngaju *pananen*, “python,” from Skt. *phanin-*, “cobra, or the demon Râhu,” *phanà-*, “expanded hood of snake (especially cobra).” In 1613, the Portuguese captain Paulo Rodrigues da Costa noted that the corpse of a chief in the region of Mazalagem (northwestern coast) was placed on an elevated platform resting on four wooden stakes, encircled by spears stuck into the ground; a pot placed under the platform collected the body humors, which were later thrown into a lake, and this until “the flesh goes dry” (Kent 1982: 11). The “Vazimba” living in the Highlands attributed power to snakes as “masters of the waters”; this belief was surely connected to funerary practices for past sovereigns: a swamp near Imerimanjaka received the remains of Queen Rangita (according to tradition, a dugout canoe, covered by a second one, contained either the corpse or the viscera); during the nineteenth century, it was there that people used to go and fetch water for the queen’s bath, during the Bath Festival called Fandroana marking the annual “New Year” (for the northwest, see also Decary 1959, Delord 1961). To this day, the Tañala Zafirambo throw the empty royal coffin *karanangy* and the liquids from the corpse into a waterhole, thus allowing the king to reincarnate as a crocodile (or sometimes as a *fañano* snake). *Karanangy* also denominates a three-colored snake, red, white, and black, the three fundamental colors of the universe.

Rituals, including the collection and immersion of liquids from the corpse, have been mentioned in the Sakalava and Betsileo regions, with reincarnation as mottled eels (*Anguilla marmorata* Quoy & Gaimard, 1824) or African longfin eels (*Anguilla mossambica* Peters), called *tona* on the east coast and sometimes in Imerina (for the Sakalava and the “Vazimba dynasties,” see Delord 1957: 117, and 1961: 28; for the Betsileo, see Allibert 1990: 8). The term *tona* is of Austronesian origin.

The evisceration of the corpse, followed by the collection of a maggot, which was thrown into a waterhole or placed in the tomb, were widespread practices in ancient Imerina (Domenichini-Ramiaramanana 1983: 415 n. 179). Note that the Sakalava kings recognized Vazimba as “masters of the waters,” owners of the lakes (cf. the ceremony of

“opening of the water,” a festival marking the start of the fishing season, performed during the month *Volambita* [June in this region], at Lake Ranomena).⁴¹

Another “Vazimba” custom described in the Highlands hints at Africa: this was the practice of temporarily diverting a river’s course, in order to bury a prince in the riverbed (Raison-Jourde 1991: 64). In the northern Betsileo region, N. Rajaonarimanana has noted the expression *Maito i Manandriana*, “The Manandriana River is blocked,” alluding to the custom just described. Parallel African data have also been mentioned: “The corpse of a Luba chief is often buried near a river or even in the riverbed.” In the Luba national epic, we find: “Nkongolo’s defeated partisans [Nkongolo was the first sacred king of the Luba] diverted the Lomani River in order to bury the corpse . . . of their chief; the waters of the river later covered the tomb” (De Heusch 1972: 44).

As previously noted, the name “Vazimba” designated mixed populations, which were the crucible for various cultural syncretisms. Funerary rituals reported by Birkeli among the western Vazimba, including disposal of the corpse in a dugout canoe until the flesh went dry and the later burial of the bones, recall the practices of “double funerals” known under various guises throughout the island and which are related to Indonesian customs.⁴² Dessication of the corpse before burial is also known in East Africa, however, as seen in the smoking of the royal corpse in Rwanda, Burundi, Buhaya (northwestern Tanzania), and Bunyoro (western Uganda) (Ndayishinguje 1977: 20; Mworoha 1977: 288–290). Once again, it appears difficult to interpret the parallels noted. In the Quiteve (Mozambique), the king’s body was left on a platform until it was reduced to a skeleton; then the bones were placed in a cave (Randles 1975: 92). Among the Shona, the chief’s corpse is shrouded in the hide of a black ox (Bourdillon 1976: 233), a custom found among the Sakalava and – at the linguistic level only – among the Tañala of the Manambondro River (an African influence is almost certain here).

The belief in the king’s reincarnation as a crocodile was known on the western Malagasy coast, as well as among noble Betsileo clans and the Tañala Zafirambo (whence the use of crocodile teeth to set the teeth of deceased kings). This belief also appears to be connected to the East African world. The idea of the reincarnation of ancestors as crocodiles, however, was also present in Indonesia (see Loeb and Heine-Geldern 1935, for Pageh and Nias).

By contrast, the belief in reincarnation as eels (noted among the Sakalava, the Betsileo, and in the Betsimisaraka country), has been linked to the Indonesian archipelago. A symbolic connection is universal between eels and snakes. While snakes appear to be related to both death and kingship in East Africa, a religious link between chiefs and snakes has been described in various regions of Indonesia. Thus, the

⁴¹ Birkeli 1936: 20. According to Birkeli, the presence of fish in offerings during religious ceremonies was a feature “particular to the Vazimba.” However, see Beaujard (1995) for a description of the offering of fish on the east coast in ceremonies linked to rice cultivation, since fish are viewed as connected to the spirits of the earth.

⁴² See O. J. A. Collet (1925: 367) on the ancient practices of the Pakpak Batak for their chiefs; B. Renard-Clamagirand on the Ema of Timor (1982: 144); J. Koubi on the Southern Toraja of Sulawesi (1982: 54); D. Lombard and C. Pelras (1981: 245) on Nias and the Ngaju of Kalimantan. The use of canoes for funerary rituals was known in various regions of Indonesia and Malaysia.

Sailendra kings who reigned on Sumatra were said to descend from a *naga* snake (Wolters 1970: 86). The Buddhist symbol of the seven-headed snake protector of the Buddha was grafted onto ancient Malay beliefs.⁴³ On Timor, some chiefs were granted the title of “sacred snake” (Van Wouden 1935: 60, 124).

While it is not always possible to distinguish between cultural connections and simple parallels – at the ritual level⁴⁴ – an African influence can be seen in Malagasy myths and tales. The weft of the myths of the Swallowing Monster is clearly of African origin (Ottino 1977), whereas the “character” of the Malagasy seven-headed snake, which “disappeared into the sea and later jumped to the sky” (Van Gennep 1904: 277), borrows some features from the Indian *asura* Rahu and from the Indonesian *naga* (the Zafiraminia played a role in this cultural legacy; see above). Other beliefs described on the eastern Malagasy coast probably originate in Southeast Asia. The Tañala state that one type of large snake wears a glowing stone which the snake uses when hunting at night. In Malaysia, also, cobras are said to have glowing stones set into their heads, giving visibility at night. Another kind of snake wears a stone in its mouth (Skeat 1900: 303). Beliefs regarding snakes in Madagascar – they are linked to the lower world and to the moon, and to water and earth – thus show a complex blend between concepts from the Austronesian world, India and Africa. In Madagascar, an African influence can also be seen in certain mythical figures: the Trimobe ogre; the Child who challenges the chief; the “Zañahary [God] of the Lower World”; and the “difficult girls” (Beaujard 1991, 2001).

Syncretic Islam of the Antemoro Kingdom (Southeast)

The ports of northern Madagascar were the island’s most active places, where most ships from overseas arrived, and whence merchants and artisans departed for smaller ports. It was within the context of growing Muslim northern towns and expanding trade along the coasts that Muslim groups arrived in southeastern Madagascar. These would be the founders of the Antemoro kingdom. Particular attention has been paid to the role this kingdom may have played in the history of Madagascar.

It was during the second half of the fifteenth century that Muslims from the Vohemar region settled at Ambohabé, at the mouth of the Matatàña River. They claimed to be of “Arab” ancestry, coming from “Mecca.” Historical tradition – both oral and written in Arabico-Malagasy *sorabe* manuscripts – recounts the arrival, on a ship, of the “sultan” (*solotano*) Ramakararo and his son Ralivoaziry, ancestors of the Anteoñy (“people of the river”), alongside the diviner Andriantsimeto Rañaha, ancestor to the Zafintsimeto. They were accompanied by servants and pagan *kafiry*, who were the ancestors of the Antemasiry and other groups (Rombaka 1957: 11–12). The Anteoñy later formed themselves into a “pseudo-caste” controlling the political

⁴³ A seven-headed snake tops the Kedukan Bukit stone in Palembang (see above). One formula, contained in a curse, tells us that participants in the oath-taking ceremony “will not be swallowed (by the snake? by the waters?). Moreover, one wonders if Ibn Khurdādhbeh’s written accounts (1865: 287) of “huge snakes in the mountains of Jāwaga [Zabag = Srīwijaya] which devour men and buffaloes” may in fact reflect local myths that may have been brought to Madagascar and East Africa (see below).

⁴⁴ Austronesian influences on the East African coast cannot be ruled out.

power within the Antemoro kingdom, which was set up during the early sixteenth century. Three groups – Anakara, Zafintsimeto, and Zafimbolazy – united under the name *antalaotra*, “people of the sea,” took charge of the religious power and formed the second “pseudo-caste.” The Zafintsimeto were geomancers and specialists in earth and water. The Anakara were astrologers, specialists in the heavens; they claimed descent from another Muslim, Alitavaratra, who arrived after Ramakararo in the Matatàña valley, carrying magical books with him (Beaujard 1991–1992: 239ff.). During his journey toward Madagascar, Ramakararo encountered a storm. According to legend, in order to lighten his ship, he suggested that passengers be thrown overboard “at random” by counting up to nine each time. The passengers were placed such that each time, the lot fell on a pagan. What we see here is a “mathematical game” that was well known in the Muslim world; it was even known to the English monk Alcuin, in Charlemagne’s court (Hébert, p.c.). Yet the legend tells us nothing about the origins of these ancestors. The name Antemasiry, which derives from the Arabic *miṣrī*, “Egyptian,” does not imply an Egyptian origin of this group. Misri was the name given by the Swahili to textiles imported from Egypt. “[In East Africa], Misri origin traditions . . . represented the history of a few leading lineages, whose prestige originally arose from their association” with an ancient trade in Egyptian cloth (Allen 1993: 126).⁴⁵

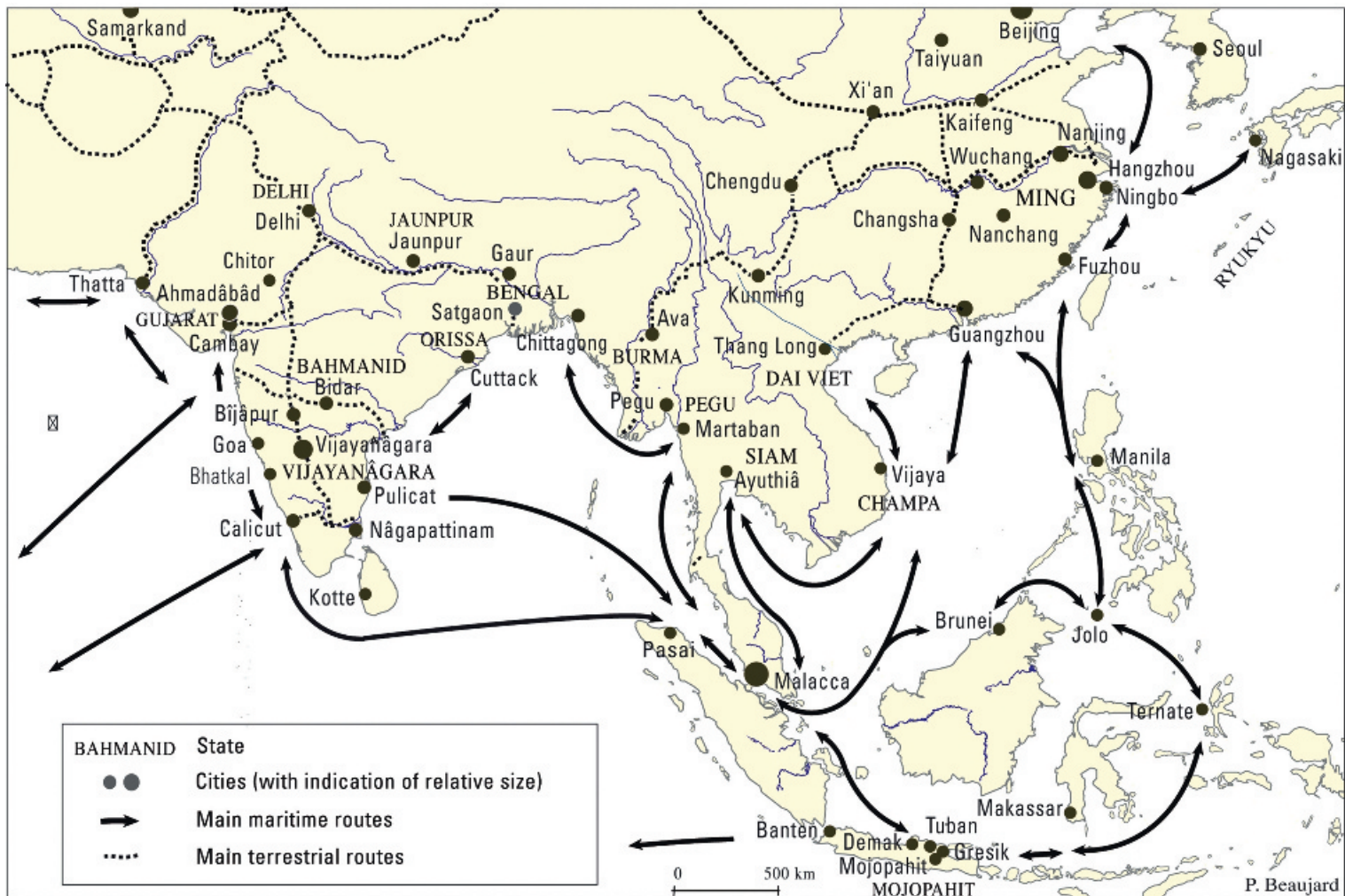
One wonders if the name of the ancestor of the Anteoñy (Ra/makararo) might be linked to Mangaroro, the place whence the Zafiraminia are said to have originated, and mentioned by Flacourt. It is frequently the case that the names given to ancestors express their supposed places of origin. Yet Arab etymologies are also possible for *makararo*; Ferrand has suggested *al-maḡrūr*, “The one who navigates adventurously, who undertakes a perilous journey” (Ferrand 1905b: 384 n.1). The change from *ng* or *g* into *k* in Antemoro renders this theory problematic, however.

According to the A-6 manuscript kept in Oslo, Ramakararo’s ship, preserved from storm, arrived at Iharambazaha (“*Hara* [port?] of the foreigners”): this may be Vohemar. For Rombaka, Ramakararo, “coming from iMaka” (Mecca?), stopped at Mahory (Mayotte), and later at Iharambazaha, Masora (Mahanoro) and Analamanofy. We have already seen the names Hara and Ialamanofy in the MP 26 Arabico-Malagasy manuscript and in the voyage of Raminia. Zafiraminia and Antemoro traditions blend arrival places and other elements relating to the migrants’ voyage. The connections between these traditions are due not only to borrowings occurring in southeastern Madagascar, but also to syncretisms already in place in northern Madagascar or even in the Comoros. The northwest and the northeast (the Vohemar region) probably acted as cultural melting pots, where various traditions that had been transmitted and reworked by the migrants blended with one another.

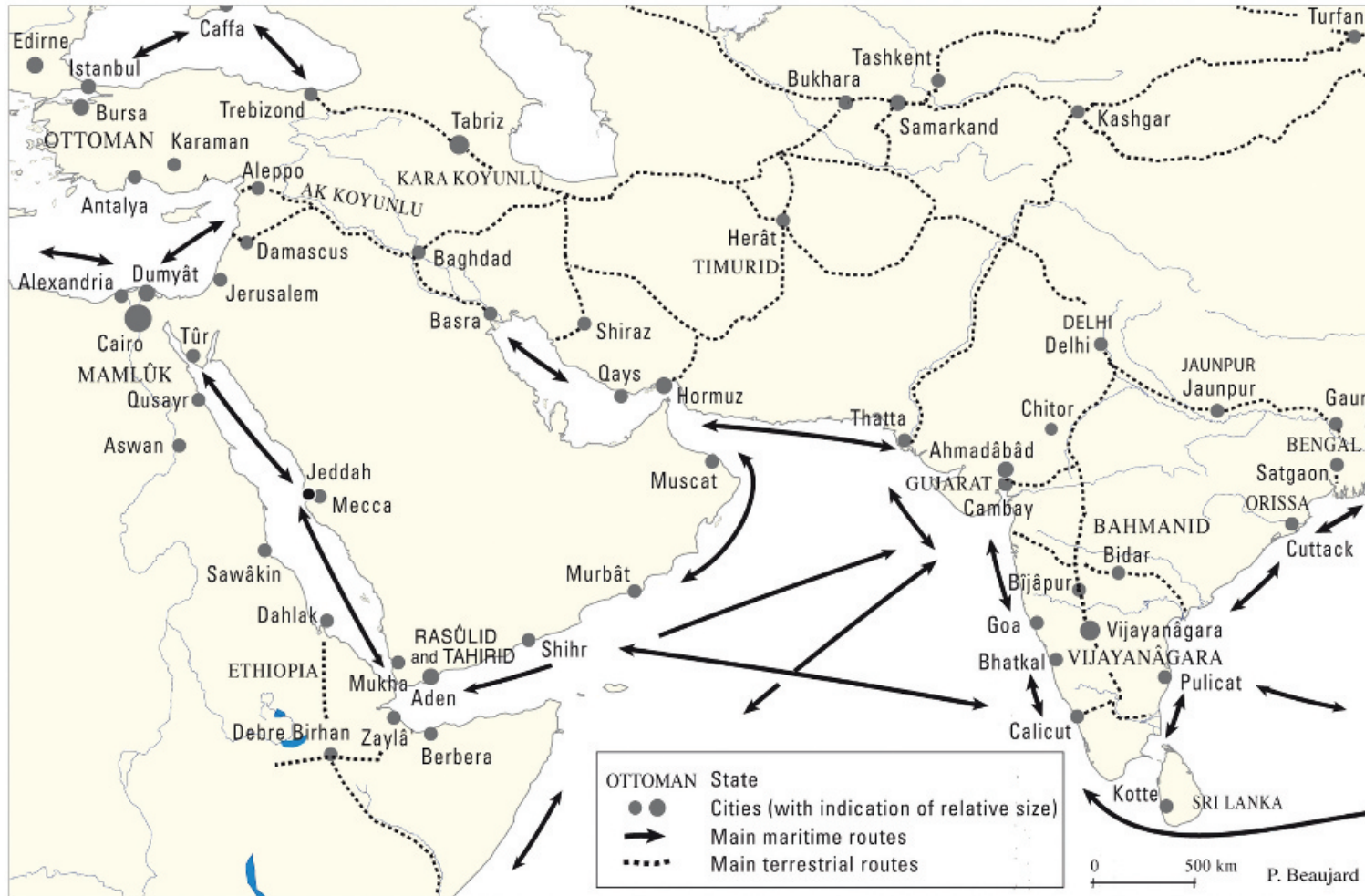
Accounts of the Muslims’ voyage along the east coast relate that they traveled with their “fetish-cows”; diviners made predictions by interpreting these animals’ behavior. Such accounts nearly match those found in Zafiraminia legends (dated to the nineteenth and twentieth centuries) and in Antemoro tradition, as well as in a legend collected in the

⁴⁵ The Antemasiry do not belong to the nobility, however, in Antemoro country. *Misr*, in Arabic, also means “border post, limit” (Bosworth 1993).

Map III.3 Eastern Asia in the fifteenth century



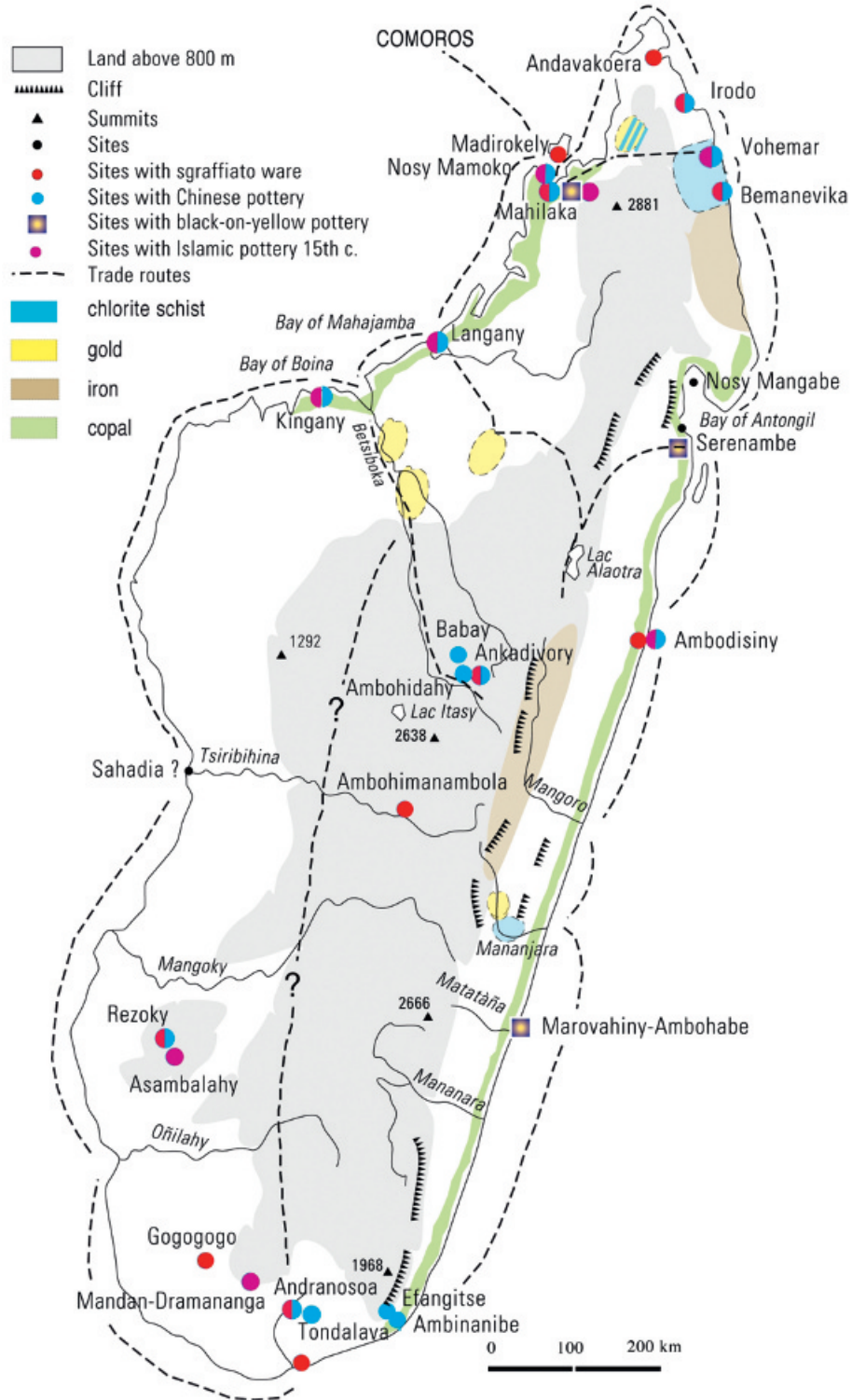
Map III.4 Western Asia and northeastern Africa in the fifteenth century



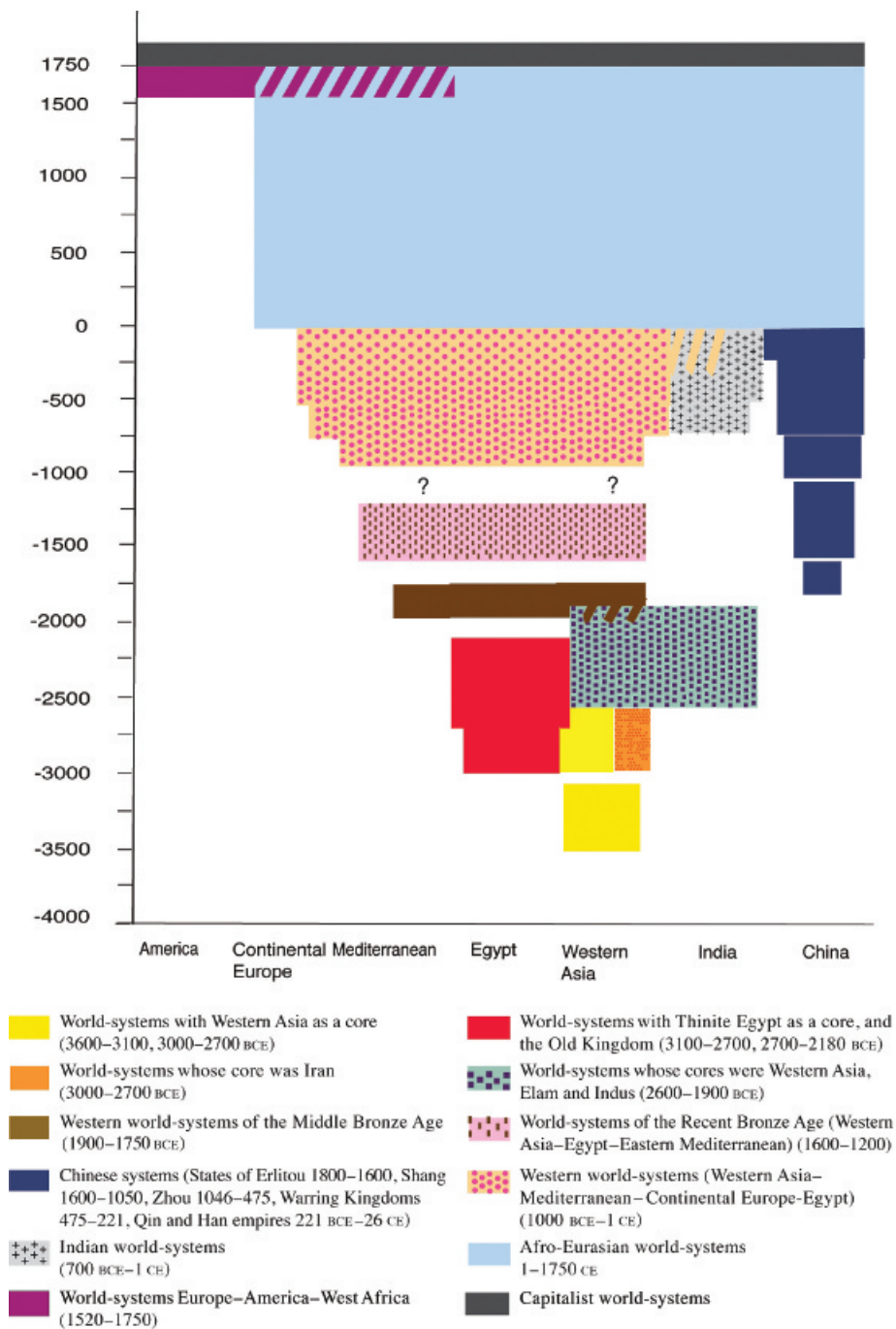
Map III.5 East Africa and Madagascar (fifteenth to early sixteenth century)



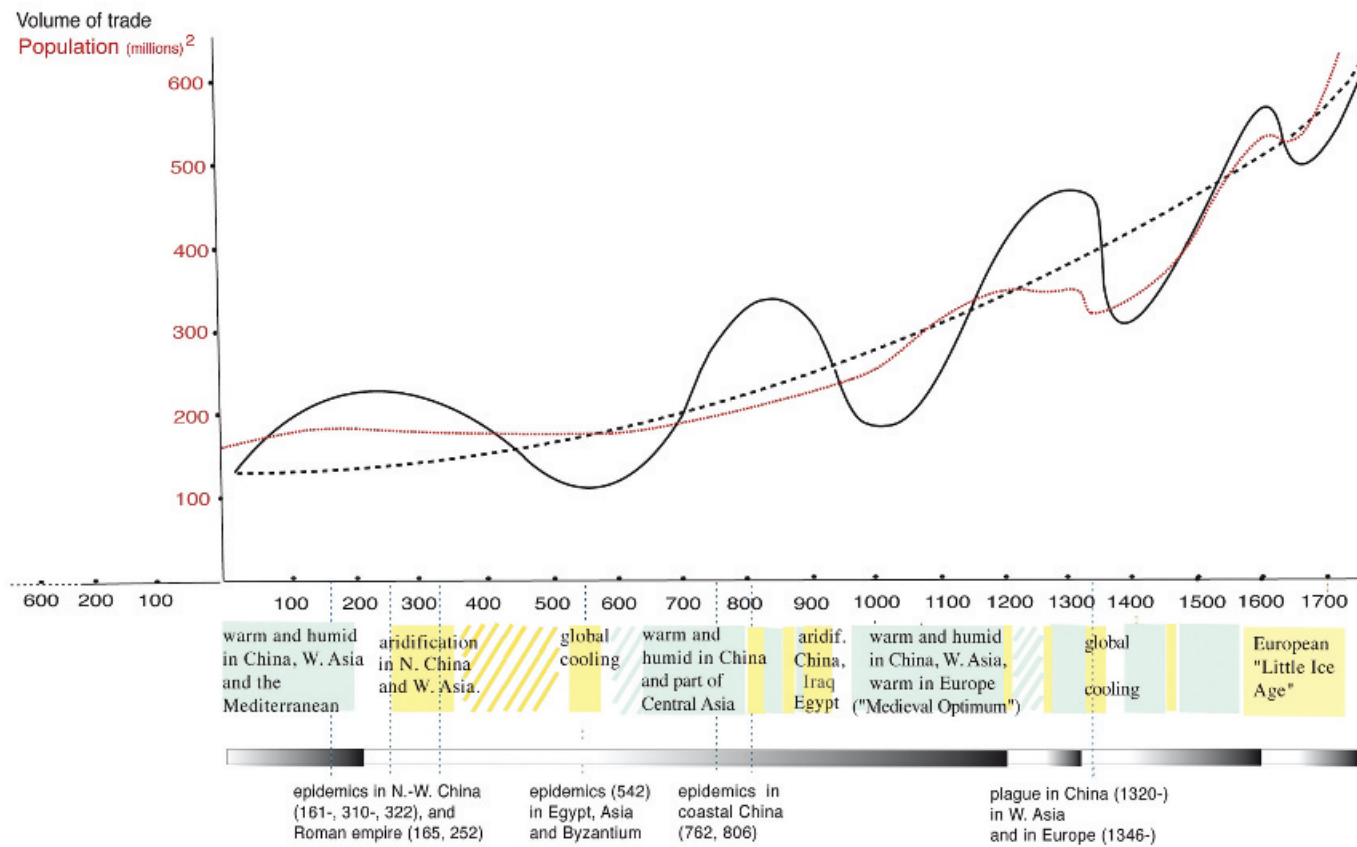
Map III.6 Madagascar (twelfth to fifteenth century): trade routes and location of raw materials

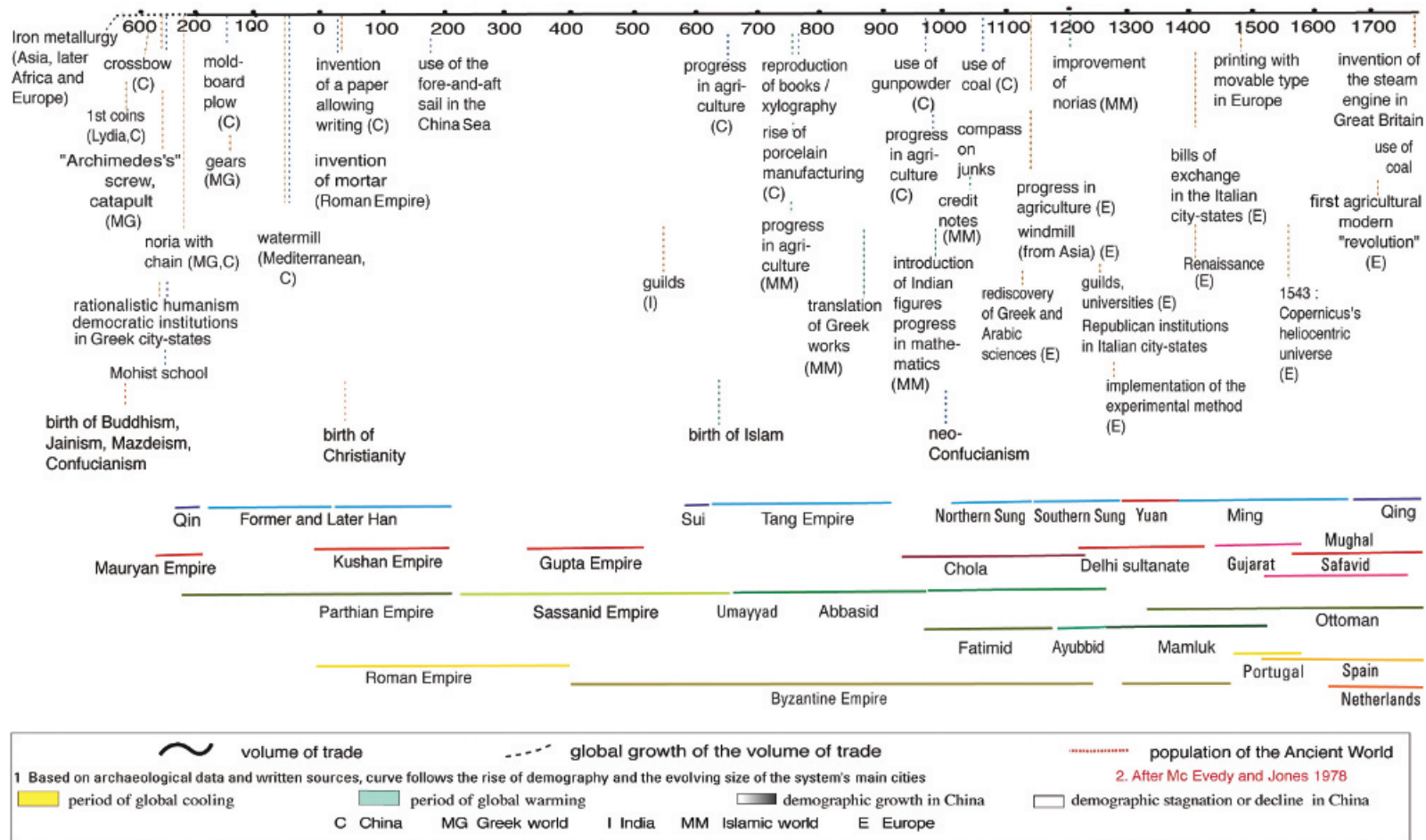


Ep.I The Asian, African, and European world-systems from 3500 BCE to 1750 CE

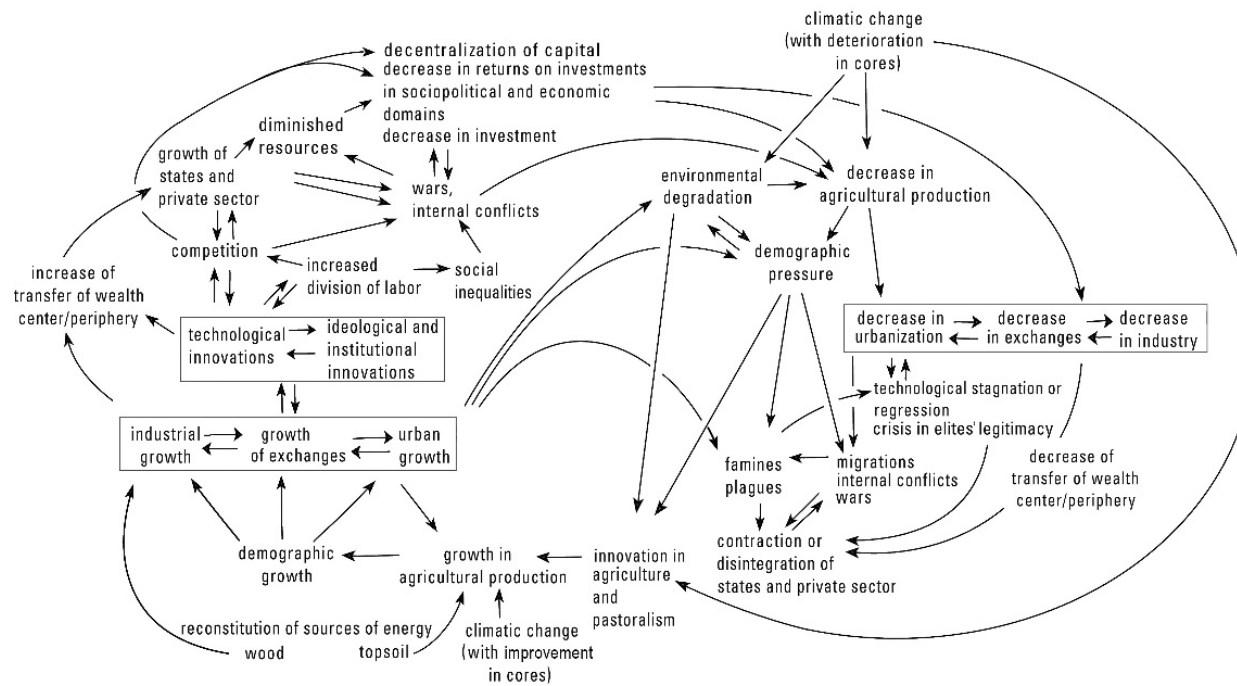


Ep.2 Economic flows in the Afro-Eurasian world-system (first to eighteenth century): correlations with climatic data, demographic growth, technological progress, and the emergence and fall of the main empires¹





Ep.3 Cyclical logic of world-systems prior to the sixteenth century



northwest (see above) (Rajaonarimanana 1990: 185, 188). Rajaonarimanana (1990) has emphasized the parallel with “the role of Mohammed’s she-camel when the Prophet arrived at Medina.” Comorian traditions similarly feature a red cock or sheep (Blanchy 1997: 115). The name “Valalañampy” given to these zebus is found in Zafiraminia manuscript MP 26 and in Antemoro tradition (Julien 1933a; Rombaka 1957), as is the name “Tatakorove,” translated by Hébert as “with nose pierced with iron,” denoting their use as pack animals (1995: 90). Flacourt recounts that during a voyage to the Highlands “Racoube” trained oxen to carry packages. The Zafiraminia may have introduced the use of pack animals in Imerina; it is a practice which had long been known in India and East Africa (Mas‘ūdī mentions it on the East African coast by the tenth century) (Hébert 1995: 102).

According to the foundation myth of the Antemoro kingdom, “thanks to the strength of his [Arabic] prayers,” Ramakararo’s son, Ralivoaziry, killed a sea hydra which had been devastating the country: this is an image of the political anarchy (according to the Muslims) existing prior to the founding of the kingdom. It is also, perhaps, an image of either the aristocrats who reigned in the region before the Anteoñy, or of invaders from the sea. In fact some *sorabe* themselves mention the existence of a prior kingdom whose center was at Ivato (the village singled out by the Anteoñy as the capital of their kingdom, during the sixteenth century). One chief ruling at Ivato was said to “rule the eight clans of the Matatàña valley,” with eight seen as a symbolic number referring to an organized royal space, according to the world vision of the Indonesian Zafiraminia, who had occupied the region before Ramakararo’s time. The political and religious dimension of the Antemoro king borrowed heavily from the Zafiraminia (here many elements already displayed complex syncretisms). Examples include the title *ndrianoñy* granted to the king; the concept of a sacred power of divine origin (*hasina*); the prerogative of sacrificing termed *sombily* (the word *sombily* does not belong to the Arabico-Malagasy vocabulary of the Antemoro aristocrats, who use the term *zozobiby*, from the Arabic *dabaha*, “sacrifice”); the possession of ritual objects such as the *antsiava* conch (although the conch is an attribute of Viṣṇu in Hinduism, and is linked to kingship in India and insular Southeast Asia, the term *antsiava* derives from the Bantu *siwa*, “horn”; horns were part of the regalia of some Swahili chiefs); and *hazolahy* drums (“masculine wood”), which are masculine sexual symbols indicating East African influences. Also part of this Zafiraminia legacy is the royal “great house,” whose roof is decorated with horns supporting carved, colored birds; further examples include the symbolism of the center and the cardinal points, with the northeast prominent; and color symbolism (red and white are linked to the nobility, while black symbolizes the commoners; these three colors are represented together on the chiefs’ togas). The Zafiraminia legacy also encompassed wet rice cultivation. As pointed out, the Antemoro kings, like the Merina rulers, controlled rice culture. Some questions remain about the significance of the legacy in fields such as astrology and writing. We do not know whether or not the Zafiraminia used Arabic script prior to the arrival of the ancestors of the Antemoro aristocrats.

Treading in the footsteps of the region’s ancient rulers was probably a deliberate strategy on the part of the Antemoro aristocrats. It is obvious that the islamized nobles made choices taken from the “indigenous” culture in order to consolidate their power.

They created a new culture, the result of a (limited) synthesis. At the same time, the borrowings made by the islamized Antemoro nobles resulted from their integration in the Malagasy world.

Like H. Deschamps, J. Lombard and P. Vérin have suggested that the Antemoro of the Matatàña valley were the initiators of a political system which may have spread from the southeastern coast from the sixteenth century onward, fostering the development of royal powers everywhere. This system, writes P. Vérin, was “conceived by diviners, Arabico-Malagasy scholars, who were experts in political rituals and magic” (1990: 59). Vérin adds: “this crucial innovation on the part of astrologer-diviners who became king-makers came from coastal settlements inhabited by islamized groups” (1990: 59). It is true that “monarchies usually referred to southeastern Madagascar when locating their dynastic origins”; and we know that diviners from southeastern Madagascar used to travel throughout the island (Raison-Jourde 1983a: 18). However, as pointed out in various publications, the reference to an Antemoro and “Arab” origin had no real substance in the political and religious arenas (Beaujard 1991–1992, 1999). In fact, in the development of large kingdoms and the relative unity of their symbolic conceptions, the Zafiraminia played a more significant role over time than did the Antemoro aristocrats. The kingdom of the Matatàña valley is a case apart; any points of convergence between the Antemoro kingdom and other Malagasy kingdoms result primarily from a shared Zafiraminia legacy. As F. Raison-Jourde (p.c.) suggests, it is possible that the arrival of the Europeans, bearers of a script which may have appeared to be the basis of their powers and wealth, helped enhance the aura of the Antemoro diviners, who also possessed knowledge of writing. The figure of the Antemoro diviner has led to a myth according to which the kingdom of the Matatàña valley exerted a leading influence in the formation of the great Malagasy systems. Yet, with the partial exception of the seventeenth-century Zafiraminia kingdom in Anosy, in other great Malagasy kingdoms we do not find the dichotomy seen in the Antemoro kingdom between political and religious powers (this divide is known at Moroni, on Grande Comore, and in some parts of East Africa). The significance of the opposing notions of “clean” and “unclean,” as well as “Arab” talismanic science are other features which gave the Antemoro kingdom its originality. In this kingdom, knowledge of the *sorabe* manuscripts, with their magico-religious contents, helped form the basis for the nobles’ power, and not only the power of the religious chiefs *katibo* who belonged to the *antalaotra* groups, but also that of the political Anteoñy chiefs.

The old manuscripts contain no dating with respect to the Hegira, a fact that is strange for a people who claim to come from Mecca (Dez 1984). The *sorabe* usually place an event in time by indicating the day and the month, within a “week of years” (a cycle of seven years, where each year bears the name of a day of the week). The seven-year cycle, pointed out by Flacourt in Anosy, exists in the Comoro Islands (the first year of the cycle, as with the Antemoro, is called “Friday”) and on the Swahili coast (Flacourt, ed. Allibert 1995a: 239; Hébert 1966: 52). The week of years is mentioned in the Bible (Book of Jubilees and Book of Leviticus). It was also known in Thailand and Java (Rabedaoro 1966).

In addition to sermons and pious formulae, which grew fewer after the seventeenth century, the manuscripts' content includes mostly formulae permitting the composition of charms; formulae comprising prayers (*doha*) in Arabic or in Arabico-Malagasy pidgin; prayers from the Koran (*simolabo*, *similahy*, from the formula Bismillah, "In the name of God"); invocations addressed to angels (*malaika*); esoteric signs; isolated letters; lines of letters and numbers (*talasimo*); and magic squares (*matsaraba*).⁴⁶ The *sorabe* also contain elements of astrology; geomancy; "predictions" (divination through the interpretation of certain events); and esoteric texts, on topics such as the symbolism of the pieces used in the Arabico-Persian game of chess (*fana-robe*). The Antemoro scribes no doubt borrowed their "science of talismans" first of all from Arab magical literature. One basic book from this literature is said to have been written by al-Būnī, who died in 1255; in fact, disparate books have been put together under al-Bunī's name (Fahd 1987: 230–232). The Muslim inheritance, allied to this heterodox learning, still predominates in Arabo-Malagasy texts. While the mention of "the first three Sunni caliphs and the two founders of orthodox schools" might lead one to believe that "the Malagasy Muslims were Sunnis in the sixteenth century," G. Ferrand has also discovered, in the MP 24 and MP 25 manuscripts at the French National Library (which may date to the sixteenth or seventeenth century), a Persian text which gives "the first eight Shia imams of the Duodeciman sect" (Ferrand 1904: 14–15, 63–70; 1905b: 401–402).

Note that geomancy, of Arabic origin, was probably practiced by the Malagasy healer-diviners prior to the arrival of the Anteoñy and of their allies. In Anosy during the seventeenth century, Flacourt writes: "There are kinds of ombiasse among the blacks, who go and see sick people; [these *ombiasy*] cannot read or write, they only practice the *sikily* [geomancy, from the Arabic *shakl*, "figure, shape"], and use rock crystal, topaz, aquamarine, amethyst and girasole" (Flacourt, ed. Allibert 1995a: 248).

Alongside the dominant Arabo-Persian influences, other inheritances appear in astrology. The Antemoro calendar is not lunar, like the Muslim calendar, but luni-solar. The names for the months – lunar – are derived from signs (called "astrological destinies") *vintaña* of Arab zodiac origin (although the word *vintaña* derives from the PMP **bintan*, "star, planet").⁴⁷ Each *vintaña* governs two or three days of the month. The twenty-eight corresponding days also bear the names of twenty-eight Arab lunar houses.⁴⁸ As is the case in the island's other regions, the names for the days of the week derive from Arabic terms (with no Swahili influence). In order to adjust the lunar calendar to the solar calendar, the *katibo* observe the distance and

⁴⁶ *Talasimo*: from the Arabic *ṭilasm*, "talisman" (plur. *ṭalāsim*) (Swahili *talasimu*, "talisman"). *Matsaraba*: cf. Arabic *murabba'* (plur. *-āt*), "square," and *tārbi'a*, "square." On magic squares, see Graefe and MacDonald 1961; Sesiano 1996; Hamès 1997, 2007.

⁴⁷ The Merina also use these lunar months, with names from the Arab zodiac. This reflects a Swahili influence: "Swahili astrologers," writes Knappert (2005, 11: 682), "concentrate first and foremost on the signs of the Zodiac, *Buruji za Falaki*, whose names are all from Arabic. Each sign creates a particular character in the person who was born under it." The zodiacal terms in Madagascar come directly from Arabic, and not from Swahili. Unlike the Antemoro calendar, the Merina calendar does not repeat a month: the Merina use a lunar calendar.

⁴⁸ See Dez 1984: 77, 111–113. Each month has 29 or 30 days.

position of the moon in relation to the stars of Alikilily (Arabic Al-Iklil), in the constellation Scorpio, under the days of astrological destiny Alimizàn (“Scales”) during the first three months of the year (Alahamaly, Asoro, Alizoza: March–April, April–May, May–June). These stars are called Alokofofo, Azobanà, and Alikilily: their names denote both stars and days. When the distance is found to be too great, the month Asaratà (fourth month) is repeated, and this happens every three years at least (Beaujard, unpublished manuscript). While Islam frowned upon the repetition of one month every three years, it had been practiced in pre-Islamic Arabia (Rodinson 1962: 163). It is also found in India, in Indonesia⁴⁹ and in the Jewish calendar. The Muslim lunar calendar (with Arabic names for the months) was known, but was then abandoned, perhaps at the same time as was the observation of Ramaḍan. The position of the moon in relation to Alikilily also allows for certain predictions, a fact that M. Rodinson has noted in various places in the Muslim world (1962: 191–192).

Other heavenly events, connected to the calendar of astrological signs, are the basis for predictions concerning the entire Antemoro region, especially events such as the first “rumbling of thunder” at the start of the rainy season, and eclipses of the moon (*volaña hanin-dRao*, “moon eaten by Rao”) and of the sun. A book of atmospheric signs and their divinatory meanings is known within the Muslim world; it is the *Malḥamat Dāniyāl*, attributed to Daniel,⁵⁰ a prophet often mentioned by the Anakara as the source of their knowledge.⁵¹ But the Antemoro expression denoting the eclipse of the moon shows other influences: the monster “Rao” is none other than the *asura* Rahu, eater of the moon in Indian traditions.⁵² This may reflect a borrowing from the Zafiraminia.

Other elements of the Antemoro kingdom allude to India, especially the opposition between clean and unclean, the existence of pariahs (from the seventeenth century onward [Beaujard and Tsaboto 1997]), the prohibition from walking in a noblewoman’s shadow, and predictions regarding snakes. Should these be interpreted as Indian influences or – at least for the pariahs – as parallel developments? The antagonism between purity/impurity also characterizes the Swahili world, along with the opposition between the patricians of the “stone towns” and the “barbarians” of the countryside.

Many African influences can also be seen. The name “Kazimambo” nowadays applied to part of the Anteoñy clan (they are groups having no access to royal power), appears to have denoted the entire Anteoñy clan during the seventeenth century (Flacourt, ed. Allibert 1995a: 124). It derives from Bantu terms: in Shona, *kazi* means “feminine,” *mambo* is a royal title; *kazimambo* initially meant “the

⁴⁹ For India, see Renou and Filliozat 1953: 725. For Indonesia, Geertz 1966: 51.

⁵⁰ Ancient versions of the *Malḥamat Dāniyāl* are known in Greek, Syriac, and Arabic. “These written texts appeared in an agrarian society and are closely related to agricultural almanacs.” They seem to derive in part from Assyro-Babylonian treatises (Fahd 1987: 408–412) (also 1986: 231). The Anakara tradition has retained only some of the predictions developed in the *Malḥamat Dāniyāl*.

⁵¹ Muslim traditions attribute the origin of various types of esoteric knowledge to Daniel. See Hamès 1997: 17.

⁵² Ottino 1974c: 75; Berthier 1933: 103. See above.

Queen” (Ottino 1986: 9).⁵³ According to Flacourt, Kazimambo may have been the name of “the daughter of a great Lord, a prince of the country of Matatane and a Negro”; a Muslim chief married her, “on the condition that the lineage from this marriage would be called by the name of this daughter. As it is the way throughout southern [Madagascar] that the name of a lineage is inherited in matrilineal line” (Flacourt, ed. Allibert 1995a: 124). Flacourt thus highlights matrilineal descent patterns, which is unsurprising if we refer to the Zafiraminia or indigenous Malagasy groups, which are built on cognatic systems. However, it is surprising indeed for the Anteoñy group, whose patrilinearity is quite pronounced (see Ottino 1986: 48–50). This set of contradictory elements regarding the name Kazimambo indicates some changes in the Antemoro aristocracy and a likely reshuffling of the Anteoñy genealogies.

It is interesting to link the etymology of the name “Kazimambo” with certain African features of the figure of the Anteoñy king: these are another originality of the Antemoro kingdom. While the data referred to here are more recent than the sixteenth century, African influences on the Antemoro kingdoms probably go back to a period prior to the seventeenth century. In the Antemahazo and Antesambo groups, part of the Anteoñy clan, the entire community captures the future king prior to his enthronement (this capture expresses his symbolic removal from his group of descent). The king’s power of life is linked to the integrity of his body and soul (one cannot choose a king who is in poor health, or afflicted by a mental or physical defect). The king is responsible for happy events as well as the kingdom’s misfortunes, such as poor harvests or unsuccessful breeding; if bad events occur, he can be removed from office, or even killed.⁵⁴ In Africa, the king is a “scapegoat,” who takes upon himself any evil occurring in his kingdom. The [African] king, notes F. Héritier (1973: 121), “is the rubbish heap, one who gathers and takes everything upon himself.” In the Antemoro kingdom, ritual regicide was not the rule, as was the case in some African societies, but rather an occasional practice; it is the only known example of this in Malagasy societies.⁵⁵ The Antemoro king was not a “fetish-man,” as were some African kings, but was clearly different from the figure of the deified king of Imerina and the Betsileo country (although the idea of the king’s responsibility for the kingdom’s prosperity does exist in the Malagasy Highlands, as well as in the sacred kingship of India and Southeast Asia). Moreover, the sacrifice of a black bull every seven years, each “year Friday,” near the tomb of the Anteoñy ancestor Ramarohalaña at Ambohabe reenacts the symbolic killing of the king in

⁵³ In the Comoros, the term *kazi* indicates a function, with the idea of rank. This term is of Bantu origin; its original meaning is “woman” and “dwelling,” a reference to matrilinearity and territoriality (S. Blanchy, p.c.).

⁵⁴ See Hébert 1980: 150. The African chief is held responsible for natural or social disasters; he can be stripped of his function due to “mystical incompetence” (see for example J.-C. Muller, on the Rukuba; de Heusch 1987: 14).

⁵⁵ Except for the killing of King Radama II in Imerina in 1862. He was killed by strangulation: it was forbidden to shed the blood of a king.

a ceremony of regeneration of royal power (cf. the yearly sacrifice of a black bull, substituting for the king, by the Swazi of southern Africa).⁵⁶

This attempt on the part of sacred kingships to regenerate their power of life through regular sacrifices appears to be universal. But some symbolic dimensions of the color black, associated with rain and the Antemoro king (a black bull is sacrificed during the enthronement ritual), may well be reminders of the role of rainmaker attributed to some sacred African kings. This role is assigned to religious chiefs *katibo* in the Antemoro nobility, and it probably fell to the kings in Anosy during the seventeenth century (the nickname “black bull” for the Antemoro king Andriamasy during the seventeenth century should also be pointed out).⁵⁷ A black bull was also chosen for the king’s enthronement in the kingdom of Quiteve during the nineteenth century; the same can be observed nowadays among the Shona and the Swazi. In the Quiteve kingdom, the corpse of the king was wrapped in the hide of a black ox (Randles 1975: 93). Turner has noted the ambivalence of black symbolism among the Ndembu, and has pointed out that in Africa, “black tends to become an auspicious color in regions where water is short, because black clouds bring rain and fertility” (1967: 82). The African influence noted in the Antemoro culture may have come from the region of the Zambezi River or from a region further south. Like the Shona mediums who dress in black, the religious chiefs of the Anakara clan cover their heads with a black cloth when they write charms for rain.

Division into age groups – so important in the Comoros (Blanchy 2010) – is another African feature of Antemoro society (among nobles as well as commoners). Moreover, the Anakara keep relics called *tokambony* (“unique above”), which are held secretly by two political chiefs known as *randriambe*. The relics, wrapped in red cloth, are enclosed in baskets nested within each other. They are concealed from public view by a cloth hanging over them, in the northeast corner of the “great house” (the Merina royal *sampy* were also wrapped in red silk cloth, and hidden; and the teeth in Tañala royal relics are attached to a piece of red silk cloth). The taboos attached to the *tokambony*, their name *zañahary be* (“great gods”), and their status as life charms evoke the royal relics of the Tañala country and of the island’s west coast, where this practice of keeping relics appears to be African in origin. The Anakara *tokambony* may contain the remains of ancestors.

An Antemoro king or princes held the prerogative of spending the first matrimonial night with a newly married female commoner; this practice also has its parallels in East Africa: on the northern Swahili coast, it is mentioned as the right of some pastoral chiefs who were in positions of force in alliances with coastal groups (Pouwels 1987: 15).

As also mentioned above, the term “Maka” (usually translated as “Mecca”), given as the country of origin for Antemoro aristocrats, referred to slave traffickers in

⁵⁶ Various African societies killed their kings after seven years: this was the case in Nigeria for Yoruba or Ibo rulers, and in southern Togo for Evhé chiefs. Here we are obviously dealing with parallel symbolic systems. On the seven-year “pilgrimage” to Ramarohalaña’s tomb, see Beaujard 2006.

⁵⁷ The role of the king as rainmaker, whose ancestors are intercessors with the Supreme God, has been emphasized by T. N. Huffman for the culture of Zimbabwe (2000: 15). The *Kilwa Chronicle* gives the name “New Rain” to a ruler of this city during the early fifteenth century (Sutton 2001: 434).

Mozambique; on the Mozambican coast, the term designated a mixed islamized population.

The low status of fishermen was another feature of Antemoro society that can also be found in the Comoros, along the East African coast, and in India (Pouwels 1987: 48; Vernet 2004: 393).

In the domain of cultivated plants, a secret Antemoro language has *alikirary*, “yam,” which appears to be related to *chirāze*, “yam,” noted in Mozambique during the nineteenth century; *chirāze* itself may derive from the Tamil *kilari*, “to dig” through the Proto-Sabaki **kilazi* (see Volume 1). The Malay *keladi*, “taro” is probably connected to the Tamil word, and Mas’ūdī writes of a tuber from East Africa called either *kaladi* or *kalari*, depending upon the transcriber. A link with the Yemeni *kērīr*, which refers to the taro, is more unlikely (Schweinfurth 1912: 135; Portères 1960: 175).

Do the African features noted here reveal cultural transactions with groups living in the Matataña region prior to the islamized Antemoro, or do they signify the African origin of at least part of the Antemoro nobility (with neither hypothesis excluding the other)? It appears difficult to decide one way or the other. It may be that some components of the Antemoro aristocracy came from the Mozambican coast. “[The Zafikazimambo],” writes Flacourt, “are more dark-skinned than the other white [Zafiraminia]” (Flacourt, ed. Allibert 1995a: 124). Moreover, Portuguese sources mention the presence of “Moors from the Malindi coast” at Ambohabe. Research conducted on the secret language of the Antemoro aristocrats (a language especially used by the Anakara), however, has revealed a large proportion of words of Arabic origin, with no significant Swahili influence (Beaujard 1998b).

Moreover, the “pilgrimages” to Ramarohalaña’s tomb each “year Friday” refer us to sanctuaries of the Muslim world associated with the cult of figures viewed as “friends of God” (*auliya*, singular *walī*, a term usually translated by “saint”). Located in a forest whose crossing is seen as an ordeal, the tombs of hallowed ancestors at Ambohabe resemble the *siliho* enclaves on Grande Comore, which provide inviolable “safe havens,” where a sacred grove protects the tomb of the *fē* founder of a city and a small mosque. One of these enclaves is at Ongoni (Blanchy 2011). According to the inhabitants, an undesirable person who attempts to penetrate the grove “is immediately attacked by snakes”: snakes in East Africa and Madagascar incarnate the spirits of the dead or djinns.⁵⁸ Abungu (1994) also describes East African sacred sites that correspond to abandoned settlements, with mosques, where people hang cloth banners to the trees and make presents of food, perfumes, and incense (Insoll 2003: 180). Beyond local or regional features, these ritual ensembles recall the sacred enclaves (named *ḥawṭah*) of South Arabia and to the ancient *ḥaram* sites of Hijāz (Serjeant 1981: 43). A religious figure (a “saint”) is often the source of a *ḥawṭah*, an inviolable place of peace under

⁵⁸ In the Middle East, the vegetation surrounding the shrine of a saint belongs to that saint, and no one dares cut wood in this spot (Geoffroy 1995). “In the Kurdish mountains and the Palestinian countryside, one winds bands of fabric around branches as ex-votos” (Geoffroy 1995: 41); this practice is known in Madagascar along the west coast, for trees in which spirits dwell. In western Asia, the practice probably has a pre-Islamic origin.

a sultan's authority. To shed blood in such a place is a most serious offence, and it is forbidden to cut wood in a *hawṭah*. In addition, *hawṭah* or *ḥaram* bind various tribes together (Serjeant 1981: 46, 50). Ambohabe shows several of the key characteristics of an Arab *hawṭah* or *ḥaram*. The seven-year pilgrimage unites all of the offspring of Ramarohalaña in a desire to surpass internal conflicts. It is forbidden to shed an enemy's blood at Ambohabe. In the cult of the saints of the Muslim world, the tomb of the saint "seals a new alliance between God and a region" (Gaborieau 1995b: 198). The tomb is often serviced by the saint's descendants: this quite naturally engenders some confusion between the cult of the ancestors and the cult of the saints. Already, during his lifetime, the saint has demonstrated a special divine presence, either through his healing powers or his power of levitation. Ramarohalaña and his tomb display some features of this cult of the saints, as well as characteristics of African or Asian sacred kings. Antemoro oral traditions ascribe a power of levitation to Ramarohalaña (and also to Ralitavaratra, the ancestor of the Anakara); this power is also attributed to the Prophet Muhammad by the Muslims. However, the disappearance of Ramarohalaña, who buried himself in sand, thus refusing to be buried like a mere mortal, brings him closer to the figure of the divine king, and farther from Islamic conceptions.

Evidence from Arabico-Malagasy tradition and the Antemoro kingdom shows the probable complexity of origin of Antemoro aristocratic groups (against all likelihood, researchers have too often hastily suggested a unique . . . and variable origin for these Antemoro aristocrats) and for the cultural syncretisms occurring in southeastern Madagascar and in the northern trading ports. As is the case for the African features, those elements referring to Southeast Asia raise the issue of syncretic legacies, not only of the groups already present prior to the Antemoro aristocrats, but also of the islamized Antemoro themselves.

Genetic analysis recently carried out by M. Capredon (2011) in Antemoro country reveals this complexity. It shows the existence of two haplotypes, J1 and T1, in the Anteoñy group; this "appears to point to a direct arrival of small groups of migrants from the Middle East"⁵⁹ (Capredon notes the proximity of J1 Haplotypes to those of Comorian people) but, on the whole, "the influence of Arabia on the genetic pool is less important than its cultural impact." "No mitochondrial haplogroup characteristic from the Middle East has been found, which confirms that the migrants were all men" ("the maternal heritages of the three Antemoro groups – Anteoñy, Antalaotra, and Ampanambaka – are not much different than those of other Malagasy populations," but the Anteoñy group exhibits "the highest proportion of African lineages").⁶⁰ While Haplogroup O2a1, of Asian origin, was very weak in the Anteoñy sampling studied, this haplogroup – absent in the Ampanambaka sampling – is very common among the Antalaotra (Capredon 2011: 88–89).

⁵⁹ Research to date has not found J1 in Kenya or in Tanzania. Haplogroup T1 is absent from the Ampanambaka group; it is present among the Antalaotra (9%) and the Anteoñy (55%).

⁶⁰ For mitochondrial DNA, the Anteoñy group also shows Haplogroup Q1, not found in other populations studied; the highest frequencies of this haplogroup have been described in Melanesia and New Guinea (Capredon 2011: 88).

Means of Exchange in Madagascar

The integration of Madagascar into Indian Ocean networks and the development of trade within the island were accompanied by the use of currencies in which various influences can be seen. Linguistic data indicate that the Malagasy had knowledge about various means of exchange, although barter was common.⁶¹ The etymology of the term *vola* (today meaning “money”) clearly refers to gold as the basis of the value system and reflects an Indonesian influence (cf. PAN **bularw*, “gold,” Mills 1975). The Malagasy *volamena*, “red money,” refers to gold, while *volafotsy*, “white money,” refers to silver.⁶² *Firaka* (cf. Malay *perak*, “silver”) in Madagascar denominates not silver but rather tin or lead; this shift probably results from the fact that the term arrived in Madagascar during the fourteenth and fifteenth centuries, a time when insular Southeast Asia produced coins made of a tin, copper, and lead alloy, imitating Chinese coins.

The Indonesians who introduced the term *vola* in Madagascar – after the issuance of the first gold coins in insular Southeast Asia – probably found another system in use in the Great Island, one based on silver, whence the disjunction *volamena/volafotsy* (in insular Southeast Asia, silver functioned as a “subsidiary standard of value”; see Wicks, 1992: 306). According to the Portuguese Duarte Barbosa, the Malagasy “use base silver among themselves” (1989, 1: 25). Ruy Pereira received silver bangles “from a local king” (in the Bay of Saint Augustine?) and “a local cotton fabric” as “a sign of friendship.”⁶³ This gift – which involved a counter-gift – consisted of goods used as means of exchange in Madagascar, as was the case in other regions of the Indian Ocean. We also know that during the looting of Langany in 1507, Albuquerque seized “rupees from Cambay, as well as gold and silver” (Kammerer 1950: 49). The trading ports of northwestern Madagascar thus used metallic currencies for at least some of their transactions.

The Arabo-Swahili language obviously played a role in the development of means of exchange. The Malagasy *takalo*, “exchange, barter,” comes from the Arabic *mitqāl*, Swahili *miskali*, a unit of mass equal to 4.64 grams; this etymology has already been noted by L. Molet.⁶⁴

The basis for the ancient Merina monetary system, as identified by Mayeur during the eighteenth century, was one unhusked grain of rice. The piastre was divisible into 720 units (grains of rice), an equivalency found in Swahili. The weight of a grain of rice

⁶¹ L. Molet (1962) notes that the question “how much?” in Malagasy, is *Obatr’inona*, which literally means “equal to what?” For Flacourt (2007 [1661]: 445), *les merceries et verroteries que les Chrétiens leur portent leur tiennent lieu [de monnaie]*, “the cloth and beads that the Christians bring here, they use them as currency.”

⁶² For the same reasons, one finds the name “white gold” for silver in other regions at various times. We see this denomination in the *Taittiriya Upanishad* (India, c. fifth century BCE).

⁶³ *COACM*, 1, 1903: 34. “All Portuguese sailors mention the heavy silver jewelry worn by the natives: necklaces, bracelets, ankle rings. Most of these certainly came from the melting of coins brought by the Arabs” (Hébert 1978: 199–200).

⁶⁴ The gold unit of mass, the *mitical*, as J.-C. Hébert notes (1978), varied in weight: it was 4.8 grams in Iran, and up to 5.95 grams in Arabia. While Almeida points out the absence of gold coins on the East African coast, he writes: “the weight of their mitical is equal to 460 reis in Portugal” (Axelson 1940: 231ff.). A. Nunez (1554) indicates that the term *mitical* was present in East Africa and in India (Ferrand 1920: 34ff.).

in Swahili was named *wari*, a term probably derived from the Malagasy *vary*, “rice.” According to J.-C. Hébert, this was not the oldest system in use in Madagascar. The unit of monetary value preceding the piastre was the grain of *Abrus precatorius*, called *voamena*, “red grain”; it had been “used as a weight by jewelers in India since time immemorial.”⁶⁵ The grain of rice was also used as a unit in South India.⁶⁶ According to Hébert, the *voamena* was primarily used to weigh gold (which suggests an influence from South India or insular Southeast Asia).⁶⁷ In addition, thirteen (and later ten) grains of rice were equivalent to one pod of pigeon pea (*eranambatry*): the denominations given by Mayeur indicate several overlapping systems. Iron provided a unit of account (*iraimbilanza*, “the weight of a unit of iron”). “It may be that iron bars were used in transactions as a currency of account.”⁶⁸

The use of scales to weigh different types of “currency” is attested to in the seventeenth century in terminology collected by Flacourt (1658): it includes the terms *miza*, *midza*, “scales” (from the Arabic *mizān*, “scales”), and *milandza*, “to weigh, to judge.” “The weights they use are similar to ours . . . These weights are used only for weighing gold and silver. Other things are not weighed. The unit of measure called ‘gros,’ they call it *Sompi*; the ‘half-gros’ *Vari*; the ‘scruple’ or ‘denier’ *Sakare*; the ‘half-scruple’ *Nanqui*; the ‘six grains’ *Nangue*; as for the grain, they do not have a name for this” (Flacourt, ed. Allibert 1995a: 174). In his *Dictionary*, Flacourt indicates: “grain: *venten*; scruple, two grains: *nonchi sacar*; half-drachma: *vari*; drachma or gros: *sompi*; six grains: *nanque*; ounce: *valousompi*; pound: *landza*” (Allibert 1995a: 506 n. 4). The Anosy goldsmiths claimed traditional links with Vohemar: all data lead us back to this region, notes Hébert, “as the birthplace of the monetary system,” or rather of one of the monetary systems in use in Madagascar (excavations in Vohemary cemetery have yielded a weight bearing an Arabic inscription; see [Illustration LI](#)). The terms collected have various origins. *Sompi* is probably Austronesian (it appears to be parallel to the Malay *sumpit*, “mat sack for rice or salt”). *Vari* relates to Merina *vary*, “large measure containing about one hectoliter, which means six *vata*,” perhaps from the Portuguese

⁶⁵ Hébert 1978: 221; Yule and Burnell 1968: 777. “The Lilavati tables mention [the grain of *Abrus precatorius*] as the standard for weighing precious metals, jewelry and medicines around 600 AD” (Hébert 1978: 229, quoting Molet 1962 and Paulme 1942). In fact, the Lilavati tables were written by Bhaskara Acarya, who was born c. 1115. Bosman (1705) notes the use of *Abrus precatorius* along the Gold Coast during the early eighteenth century to weigh gold powder (Hébert 1978).

⁶⁶ Thus in Sri Lanka, people used the *mangelim* or *mangelin*, which was the weight of one (red) grain of *Adenanthera pavonina* L., to weigh precious stones; it was equal to eight grains of rice (Yule and Burnell 1968: 553). The grain of *Adenanthera pavonina* was also used by the Malays and the Javanese for weighing gold and silver.

⁶⁷ Hébert 1978: 234. According to Hébert, the fact that the monetary standard went from gold to silver explains why the unit of weight *voamena* (1.125 grams) was not equivalent to that of the grain of *voamena* (0.07 grams) (in value, 0.07 grams of gold were equivalent to 1.125 grams of silver). For Hébert, *voamena*, *sikajy*, and *eranambatry* were monetary units of a Malagasy system that was older than the Arabo-Swahili system based on the subdivisions of the piastre. The *sikajy*, worth one-eighth of a piastre, may be related to the name “Rasikajy” from the population inhabiting northeastern Madagascar (see above). The etymology of *sikajy* (Swahili *šikazy*, “piastre”), which is probably the Portuguese *escudo*, however, partly invalidates the explanation suggested by Hébert.

⁶⁸ Hébert (1978) has suggested that this unit was incorporated into the denominations more recently (eighteenth century). However, he signals that *iraimbilanza* was not a division of the piastre, but a multiple of the *voamena*. It may have been the equivalent of an iron weight in silver.

bar (Arabic *bahār*, Sanskrit *bhāra*, a measure of weight) (this etymology remains uncertain) (see Callet 1974: 734; Hébert 1978: 241). For Hébert, *sakary* may have been “the price of one measure of brown sugar” (from the Arabic *sukkar*, Swahili *sukari*, “sugar”). Flacourt also connects the word *venten* to “a gold, silver or yellow copper ring, that is worn around the arms or legs.” This *venten*, which is different from the *venten* referring to one grain, may derive from the Portuguese *vintem*, “a Portuguese coin worth 20 reis.”

Cowries were probably also used as currency. Hébert (1978: 252) suggests that the term *nangy* may refer either to cowries, or to a string of cowries; but this is only a hypothesis.⁶⁹ *Nangy* may also be related to the term *hangy*, “pearl,” with the prefix *n-* deriving from the Swahili. *Nangy* as a name for currency is attested in Abinal and Malzac’s dictionary, in the composite term *sasanangy*, “one-third of a piastre.” Hébert mentions a Tsimihety proverb using the term *volanangy*. A manuscript dated to the early nineteenth century gives *nangy* as worth one-sixth of a piastre in the Betsimisaraka country. In his *Dictionary*, Flacourt also gives the term *massonara*, “coral eye,” for “coin”; this may refer either to cowries (Hébert 1978: 255), or to beads. Glass, stone, and shell beads may have been used as currency. Their names derive from Austronesian terms (*bijy*, a loanword from the Malay; and *vakaña*, related to the Ngaju *bangkang*, which is applied to something round).

As previously mentioned, chlorite-schist vessels were probably another form of currency, especially in northeastern Madagascar, as was Chinese porcelain later on; these must have been valuable assets, ones that could be hoarded or exchanged (the exports of Malagasy chlorite-schist vessels to Africa stopped precisely at the time when Chinese porcelain arrived in significant amounts, during the fifteenth century).

Unlike what has sometimes been written, Madagascar obviously used a variety of materials and products as currency, as did other regions of the Indian Ocean. Various monetary systems have been in use over time, influenced by Southeast Asia, India, the Arab world, and the Swahili coast.

⁶⁹ *Vatomany*, “weight” (used to weigh) (cf. Sw. *man*, *mani*, “weight of three English pounds” [Sacleux], from the Arabic *mann*), has no linguistic connection to the Malagasy *mangy*.

21 The Portuguese in the Indian Ocean

You cannot find a peril so great that the hope of reward will not be greater . . .
Go forth, then and . . . make your voyage straightaway, inasmuch as with the
grace of God you cannot but gain from this journey honour and profit.
(Prince Henry the Navigator, quoted by Bentley 1993: 165)

It is [trade] that ennobles kingdoms and makes their people great, that ennobles
cities, that brings war and peace.
(Pires, ed. Cortesão 1944, 1: 4)

The Portuguese were the first Europeans to understand that the ocean is not a
limit, but the universal waterway that unites mankind
(Lord Acton 1961; Findlay and O'Rourke 2007: 145)¹

The Portuguese Arrive on the Scene

Seeking to divert the trade in spices, cloth, and gold to their advantage – to the detriment of western Asia, Egypt, and Venice – the Portuguese rounded the Cape of Good Hope in 1498, and the fleet, led by Vasco da Gama, using knowledge gained from Bartolomeu Dias's expedition in 1487–1488 and maybe also Pero de Covilham's journey in 1494,² burst into the Indian Ocean. In May 1498, Vasco da Gama cast anchor in Calicut, led by a Gujarati pilot encountered at Malindi (this pilot was not Ibn Mājid, contrary to what has often been written). One of the first men the Portuguese met in Calicut was a Tunisian merchant who cried out "May the devil take you! What brought you here?" (Brotton 2002: 168). The ruler of Calicut and his entourage were far from impressed by the products brought by the Portuguese, who nevertheless left with some spices. Indeed, as J. Goldstone points out (2008: 8), "the Europeans had little of their own to trade for the costly spices, silks, and other Asian goods that they desired."

¹ The influence of Pierre d'Ailly on Christopher Columbus has been noted above. D'Ailly himself was influenced by the writings of Aristotle and other classical authors. In *Medea*, Seneca wrote: "The years will come, in the succession of the ages, when the Ocean will loose the bonds by which we have been confined, when an immense land shall lie revealed, and Tethys shall disclose new worlds, and Thule will no longer be the most remote of countries" (Watts 1985: 94).

² See *COACM*, 1: 2–3. The first to round the Cape of Good Hope was Bartolomeu Dias; he was sent by João II of Portugal, the architect of the Portuguese advance toward the Indian Ocean, in 1487–1488. Pero de Covilham sailed to Egypt and Aden in 1487. He reached the coast of Malabar, and returned via Ethiopia, where he died, "not before handing a detailed report on the political and commercial situation in the western Indian Ocean to a Jewish emissary dispatched from Lisbon" (Findlay and O'Rourke 2007: 147) (this transmission, however, is uncertain). The map by Francesco Rosselli (1492–1493) was "the first printed map which took into account B. Dias' rounding of the Cape of Good Hope, based on Henricus Martellus Germanus' manuscript maps dated to 1489" (Thomaz 2009: 154).

The Portuguese chronicles – and the strategies employed – shed light on the trading networks and the power struggles that prevailed during the late fifteenth and early sixteenth centuries. The actions of the Portuguese show that they perfectly understood the functioning of trade in the Indian Ocean,³ with its triple segmentation around hubs. They attacked and often occupied key ports located at the meeting point of two seas or two monsoon systems; they failed in Aden and Calicut (where as early as 1500 Pedro Alvares Cabral had sunk all the Arab vessels present in the port, and then bombarded the city),⁴ but captured Colombo in 1505, Goa in 1510, where Albuquerque had the Muslim population massacred, as well as Malacca in 1511. Goa was home to the largest market for horses on the Indian subcontinent. A Muslim chief from Cochin proclaimed at the time: “Now, the Governor has turned the key which opens India to his king” (Bouchon 1975: 114, quoting Castanheda). As for Malacca, “Whoever is lord of [this port],” writes Pires, “has his hand on the throat of Venice,”⁵ an analysis echoed by the cry of horror from the Venetian Girolamo Priuli: “To Venice, the loss of the spice trade ‘would be like the loss of milk to a newborn babe’” (Braudel 1990, 1: 493).⁶ On the other side of the Ocean, Muscat was conquered in 1508 and Hormuz in 1515, conquests that allowed Hormuz to be used “not to seal the Persian Gulf but as a ‘choke-point’ where customs would be gathered”; with Hormuz in their hands, the Portuguese were also able “to divert the entire trade in horses to Goa” (Subrahmanyam 1990b: 119, 125). On the East African coast, the men of the fleet of Francisco de Almeida took Kilwa in 1505 (Sofala had been occupied in 1503), looted the town, and left a garrison there.⁷ Then they sailed to Mombasa, which was looted and burnt. The German traveler Hans Mayr writes: “When the people of Mombasa came back to their fire-blackened city, they found no living thing there, neither man nor woman, young or old, nor child however small: tall who had failed to escape had been killed and burned.”⁸ Allied with the

³ Afonso de Albuquerque, who led the operations, was largely responsible for this understanding of the functioning of the networks as a whole. The endless disputes between Portuguese on the Malabar coast show that they did not all share the same vision (Bouchon 1975; Subrahmanyam 1993: 67–69). The replacement of Albuquerque by Lopo Suarez de Albergaria as governor of Goa in 1511 allowed private Portuguese trade to develop (Subrahmanyam 1993: 70–71).

⁴ This attack followed the massacre of forty Portuguese who had settled in Calicut in the same year. The port of Calicut would be devastated again and the city bombarded by Vasco da Gama in 1502, and by Lopo Soares in 1504 (Bouchon 1975: 55, 65). Two manufacturers from Milan deserted the Portuguese in 1503 and enabled the ruler of Calicut to forge 300 cannons for his fleet (Pearson 1987: 60; Heitzman 2006: 87).

⁵ Pires, ed. Cortesão 1944, 11: 287. In Malacca, as in East Africa, the Portuguese took advantage of internal tensions, which their intrusion in 1509 only exacerbated. Some of the merchants of Malacca saw the Portuguese arrival “as an alternative to the Islamic expansionism of Sultan Maḥmūd,” and they foresaw the opening of new markets (Thomaz 1993: 89). Maḥmūd, in particular alienated the Chinese community by requisitioning its ships for a campaign against a chief in Sumatra who “based [the] economy [of his kingdom] on piracy” (Thomaz 1993: 88).

⁶ Indeed, “in 1502–1503, 24% of Hungarian copper exported by the great Central European bankers the Fuggers went to Antwerp, but in 1508–1509, the figure was 49%, and this was used to pay Lisbon for spices” (Pearson 2003: 128). As early as the middle of the sixteenth century, however, the Mediterranean trade experienced a revival (see below).

⁷ The attack is reported in the book by João de Barros, *Da Asia*; see Freeman-Grenville 1975: 80ff.

⁸ Davidson 1977: 118. The city, however, was quickly rebuilt: “The speed with which Mombasa rose from its ruins [following each Portuguese destruction, in 1505, 1528 and 1586] leads us to consider the size of the economic profits made by the elites of the most active city-states” (Vernet 2005: 85–86).

Portuguese, the sultan of Malindi received a share of the booty, mainly textiles. The Portuguese presence in Malacca affected trade in the China Sea; in the 1520s, a Portuguese fleet was defeated by Ming naval forces, but the Portuguese obtained the right to settle in Macao in 1557.

The Portuguese also understood the complementarity of trade in textiles, precious metals, ivory, and spices. Indian fabrics from Gujarat and the Coromandel coast enabled them to acquire gold and ivory from Sofala, with which it was possible to buy spices in India and Southeast Asia (slightly later, gold and silver came from the Americas).⁹ As early as 1503, the Casa da India was created, which was supposed to buy and sell spices, silk, metals, and other products, and arrange their transport. The king of Portugal made the hugely profitable pepper trade a royal monopoly. While the Portuguese “paid 6 cruzados for a quintal of pepper in Malabar (including the cost of freight), the minimum price in Lisbon was 22 cruzados, thus producing a profit of 260%” (Pearson 2003: 128).¹⁰ According to Godinho, by 1515, the spice trade had brought Portugal one million cruzados, double the value of the gold and metals trade.¹¹ This Portuguese success was achieved at the expense of Egypt and Venice. Thus, “in 1504, on the quays of Alexandria, the Venetian ‘galleys’ could not load any pepper or other spices” (Braudel 1946: 15). In addition, the Portuguese required ships plying the Indian Ocean to obtain a license (*cartaz*) – issued by them – thus setting up a form of racketeering and “large-scale piracy.”¹² However, some Asian merchants willingly purchased this license, as it enabled them to benefit from the low taxes levied in ports controlled by the Portuguese (Hobson 2004: 151).¹³ Goa became the core of the Portuguese thalassocracy, in theory under Lisbon’s control. Agreements with the kings of Vijayanāgara Vira Narasimha (1505–1509) and later Krishnadeva Raya (1509–1544)

⁹ The Portuguese also obtained glass and stone beads in India. Father Francisco de Monclaro, recounting (in 1572) an expedition led by Francisco Barreto in Monomotapa, writes of beads worth one hundred cruzados which fetched three thousand cruzados among the Botonga (P. Poumailloux, p.c.). See also above for Portuguese testimonies given in 1525 and 1545.

¹⁰ Even taking into account the cost of the forts built on the Malabar coast, the profit was still 90 percent (Pearson 2003).

¹¹ Magalhães-Godinho 1990: 331; Pearson 2003: 128. The Portuguese control over the spice trade, however, quickly crumbled. While they imported from 20,000 to 30,000 quintals of pepper into Europe at the beginning of the sixteenth century, by the end of the century that figure had fallen to 10,000. By the middle of the sixteenth century, “the Mediterranean was recapturing the treasures of the Indian Ocean” (Braudel 1979, 1; Pearson 2003: 128). The Portuguese took 30 percent of Malabar’s pepper production in 1515, but only 3 percent by the end of the sixteenth century (Pearson 2003). The rise of the Ottoman Empire was one of the reasons for the Portuguese failure. It should be remembered that the Ottoman Empire took Egypt in 1517, and controlled the Red Sea and later Iraq (1534). The Turks captured Aden in 1538. The Ottomans sent a fleet toward Diu, allied with Gujarati forces in 1538, but the attack on the Portuguese was unsuccessful. Moreover, most of the spices were consumed in Asia itself (Pearson 1987: 90).

¹² Pearson 2003: 122–124. While the price of the *cartaz* was not significant, the ships were forced to stop in ports controlled by the Portuguese and pay taxes on their cargoes. According to Pearson, the “failure” to take Aden was in fact convenient for the Portuguese captains, who thus had the opportunity to loot ships sailing to this port.

¹³ In the China Sea, moreover, Chinese merchants sailed with a Portuguese license bought in Malacca or Macao, because “this made the ships officially Portuguese so they were able to successfully circumvent the ban” imposed by the Ming (Hobson 2004: 151).

ensured that the kingdom was supplied with horses from Hormuz, primarily via Goa. The Portuguese imposed their presence in Gujarat – a key region due to its exports of textiles and merchant activity – by building forts at Diu (a port captured in 1535), Daman, and Bassein. In the Bay of Bengal, they set up trading outposts near Madras and at the mouth of the River Ganges.

No power had previously attempted to take forcible control of all the trade networks of the Indian Ocean. “The arrival of the Portuguese in the Indian ocean,” writes Chaudhuri, “abruptly ended the system of peaceful oceanic navigation that was such a marked feature of the region” (1985: 63).¹⁴ The building of a network of Portuguese fortresses in the Indian Ocean represented a stage in the evolution from “the Italian *fondachi* [in the Mediterranean and the Black Sea] . . . to the Portuguese factories in West Africa” (Pearson 1991: 106).¹⁵ This image of peaceful navigation in ancient times should be qualified, however: the Indian Ocean was never an “arena of peaceful trade” as A. Sheriff would have it (2005: 21). Several areas of this ocean were famous for piracy, especially the Persian Gulf. In 825, for example, a naval force left Baṣra to “punish pirates from Bahrein who looted the ships from Iran, India and China” [Hourani 1951: 66]; the coast between Gujarat and Malabar was another dangerous region (Marco Polo and Ibn Battūta – see below – bear witness to this during the thirteenth and fourteenth centuries, as does ‘Abd al-Razzāq in the fifteenth century); another unsafe region was the Strait of Malacca (Al-Sirāfi’s book, originally entitled the *Book of the Marvels of India*, tells of pirates in the region of Kedah [Sauvaget 1954: 271]). Indian pirates were also noted on Socotra in the tenth century and later in the thirteenth. The island of Qays was “more or less a pirate state” during the twelfth century: it sent a fleet to block the port of Aden, which had refused to pay tribute, but two ships belonging to the “Sirafi” Ramisht “appeared, and helped by troops from Aden they were able to beat off the pirates” (Pearson 2003: 106; see above). Also mentioned above are the Chola naval expedition against Srīwijaya in 1025 and the Chinese fleet sent from Canton against Mojopahit in 1292. Marco Polo describes what appears to be “state piracy” on the west coast of India:

From this province of Melibar [Malabar] and a neighboring province called Goçurat [Gujarat] [in fact the account here refers to the coast between Bombay and the Malabar region], more than a hundred corsair vessels go forth on cruise every year, in order to capture other ships and plunder the merchants who ply their sea . . . But now the merchants are aware of this, and go so well manned and armed, and with such great ships, that they don’t fear the corsairs. (Marco Polo 1980, 11: 466–467, 469; Yule and Cordier 1992: 389)

Marco Polo describes the organization of these corsairs in detail:

their method is to join in fleets of twenty to thirty of these pirates’ vessels together, and then they form what they call a sea cordon, that is, they drop off till there is an interval of 5 or 6 miles between ship and ship, so that they cover something like an hundred miles of sea; for when any

¹⁴ Pearson (2003: 122–123) also points out the newness of the Portuguese state violence in the Indian Ocean.

¹⁵ As P. Norel also notes (2004: 194–195), “the ports of the Indian Ocean had nothing to do with the trading posts set up by Venice or Genoa in the Mediterranean or in the Black Sea [during the thirteenth and fourteenth centuries].” In West Africa and in the Indian Ocean, “the Portuguese imitated Venice” (2004: 200). A special Portuguese feature, agent-managers (*fêitor*) were chosen and paid by the royal house (Subrahmanyam 1999: 66; Boucheron and Loiseau 2009: 680).

one corsair sights a vessel, a signal is made by fire or smoke, and then the whole of them make for this. (Yule and Cordier 1992: 389)

The prince of Thana (near Bombay) authorized the pirates to operate from his port provided that “the corsairs gave him all the horses they captured” at sea (Yule and Cordier 1992: 389: 471), which allowed him to maintain his military power. Following Marco Polo’s account, the story of the travels of Ibn Battūta clearly shows that “trade was conducted under the protection of armed forces”: Ibn Battūta traveled from Gandhar in a fleet of four vessels – one of them being a “warship” – that carried archers and other men-at-arms on board (on the ship that carried Ibn Battūta they were “Abyssinians”). None of this was new, as Pliny had already noted the use of archers aboard ships sailing along the western Indian coast. It is clear that each local potentate owned his own war fleet. Ibn Battūta thus was present at an attack conducted by a fleet of fifty-two vessels led by the Muslim sultan of Hinaūr (Honavur) against the port of Sendābūr (Sandapur, Goa) (Ibn Battūta 1982, III: 217–218). The Moroccan traveler also noted the piratical habits of the ruler of Fakanaour (Fakanar, Baccanore) who “forced ships passing by to anchor in its port and pay taxes” (Palat 2015: 176). The ships of the Tamil ruler of northern Sri Lanka also practiced piracy (Palat 2015: 255). The large Chinese junks that sailed to India were heavily armed, since a crew of 1,000 men included as many as 400 men-at-arms. Some chiefs organized attacks against ships which did not stop at their ports.¹⁶ Srīwijaya acted in this way, as did the seamen from the Riau archipelago, who were allies of the sultan of Malacca. The Hindu ruler of Fācanaour had a fleet of twenty warships, led by a Muslim, which forced vessels to stop in his port and pay customs duties.¹⁷ South of Calicut, Ibn Mājid mentions pirates “ruled by their own rulers” (Pearson 2003: 106).

While the arrival of the Chinese fleets in India and the western Indian Ocean between 1405 and 1431 had been meant as a show of force, their behavior had been peaceful, except in Sumatra and Sri Lanka. With the Portuguese, the aims, the methods employed,¹⁸ and the religious intolerance were all new: on the coasts of the Indian Ocean, the various religions had coexisted until then without too many clashes. The Portuguese brought their hatred for Islam into maritime spaces dominated by Muslim networks. In 1502, for example, “[they] tried to get the ruler of Calicut to expel his foreign Muslim traders, but he responded that he could not do this ‘for it was unthinkable that he expel 4,000 households of them, who lived in Calicut as natives, not foreigners, and who had contributed great profits to his kingdom’” (Pearson 2003:

¹⁶ Moreover, most local chiefs took for themselves what was salvaged from shipwrecks along their coasts, if the ships were heading to ports other than their own: “Should a vessel be accidentally driven within the mouth of its river, not having intended to make that port, they seize and confiscate all the goods she may have on board, saying: ‘It was your intention to have gone elsewhere, but our gods have conducted you to us, in order that we may possess your property’” (Marco Polo, ed. Masfield 2003: 441). During the thirteenth century, the Kākaṭiya rulers abolished this custom along the Coromandel coast. Moreover, in an attempt to attract traders to his coasts, the Samori (from Samundri, “lord of the sea”) of Calicut did not follow this custom (Digby 1982b: 153–154).

¹⁷ Ibn Battūta 1982, III: 199–200. Ibn Battūta experienced an attack by twelve warships “between Hinaour and Fācanaour” (1982, III: 279). During the fifteenth century, the Russian Nikitin also mentions the large numbers of pirates along the western coast of India.

¹⁸ Pearson 2003: 124. On Portuguese violence, see Pearson 2003: 142ff.

124).¹⁹ The Portuguese practiced a violence anchored in their history, which often proved counterproductive.²⁰ In any event, this violence was fully embraced by the chroniclers: blood was turned into memory. The Portuguese were clearly partly responsible for a decrease in gold production and exports in Zimbabwe and on the Sofala coast. They tried to control the gold mines – something the Swahili had never attempted – but “when [they] found themselves in the land of gold, . . . they saw the difficulty and labor of the Kaffirs, and with what risk and peril of their lives they extracted [the gold] from the bowels of the earth and from the stones; they found their hopes frustrated.”²¹ Gold seams were exploited under difficult conditions; and the Africans did not reveal to the Portuguese where most of the extraction took place. In addition, the Portuguese were too impatient with the seasonal pace and slowness of trade. Unlike the Portuguese, the Swahili used to go into the interior with cotton cloth and glass beads “and gave them all these things on credit.”²²

The Portuguese activities of course disrupted the connections between Southeast Asia, India, and western Asia, as well as trade along the Swahili coast and between the Malagasy trading ports and East Africa.²³ Aden, Hormuz, and Calicut went into decline, as did Jeddah, Basra, Aleppo, Cairo, and Alexandria, at least during the first half of the sixteenth century.²⁴ In addition, by weakening the Egypt–Venice axis, the Portuguese contributed to the emergence of the Ottoman power. However, recent research has qualified the level of disruption to trade in the Indian Ocean during the sixteenth century, resulting from Lisbon’s attempt to gain control over maritime routes. The Portuguese did not have the means to pursue their planned policy, and their success was in fact only relative and short-lived; trade was shared with other

¹⁹ A. Pacey (1990: 62) describes the Portuguese as “the Mongols of the seas”; for their part, the Mongols appeared indifferent where religion was concerned.

²⁰ Pearson 2003: 120–122, 142ff. Pearson rightly points out that the Portuguese could have inserted themselves profitably into the trade networks of the Indian Ocean, thus avoiding the cost of construction and maintenance of forts and war fleets. According to Magalhães-Godinho, quoted by Pearson, “the Portuguese got access to the gold trade of Sofala in 1501 and 1502 without using violence, but [from 1505 onward], with the arrival of Almeida, everything changed for the worse; the policy became one of loot-and-plunder, compulsion and forced monopoly” (Magalhães-Godinho 1969: 256–257; Pearson 1998: 141). Informed by a Muslim from Calicut of the atrocities perpetrated there by the Portuguese, the ruler of Kilwa demonstrated his opposition to them, as did the ruler of Mombasa. Almeida plundered these cities.

²¹ Dos Santos, quoted by Pearson 1998: 139. See also Magalhães-Godinho 1969: 258–261, and Newitt 2002: 73, based on the account by Diogo do Couto of Vasco Fernandes Homem’s expedition to Manica (1574).

²² Magalhães-Godinho 1969: 260, quoting Barros, book x, ch. 1. “By thus giving them credit, they oblige [the Cafres] to dig [to obtain gold]” (Barros, quoted by Newitt 2002: 38).

²³ According to P. Sinclair and T. Hakansson (2000: 475), “from the mid-sixteenth to mid-seventeenth century the Swahili towns experienced increasing difficulties in maintaining their trading networks. This appears to have been primarily because of the disruptive influence of the Portuguese.” These authors, however, wonder whether other factors, for example the climate, played a role. The Portuguese attempted to exclude the Swahili from the Sofala trade, and the Portuguese presence along the coast upset relations between the coast and the interior, and therefore supplies for Swahili cities. Moreover, the arrival of the Portuguese may have led to the appearance of new epidemic diseases along the coast, thus contributing to its depopulation.

²⁴ Pearson 2003: 132. On the fall in Venetian imports from Egypt and the Levant at the beginning of the sixteenth century, see Subrahmanyam 1993: 66. This sheds light on the sending of twelve ships to the Indian Ocean by the Egyptian sultan in 1507, a fleet finally destroyed by the Portuguese off Diu.

powers.²⁵ On the East African coast, the Portuguese attempted to forbid the “Moors” (Arabs and Indians) from trading in ivory and gold.²⁶ But their net had a wide mesh²⁷ (the corruption of Portuguese administrators may have been one reason for its inefficiency)²⁸ and the Swahili trade – barely slowed down – continued along both the coasts and inland.²⁹ When the Portuguese blocked textile imports from Cambay and, in 1530, sought to impose prices that were forty times their original value, an “illegal” trade flourished, taking advantage of the many long established networks, and local textile production developed, especially at Pate, where this industry was in the hands of high-status groups.³⁰ Even near their anchor points, the Portuguese experienced difficulties. E. Alpers (2009) points out that their failure to subdue the coast opposite Mozambique Island forced them to import food from Madagascar. In 1511, they abandoned their stronghold at Kilwa, which was then in decline, ruined by factional struggles partly triggered by the Portuguese themselves. Along the Malabar coast, however, the Pardeshī and Māppīla trade was significantly affected by the Portuguese presence in Goa and the attempt to stifle Calicut (the Portuguese favored the port of Cochin).³¹ Many foreign Muslims preferred to leave. Marakkār (Maraikkayar) Indian Muslims chose to cooperate with the Portuguese while maintaining links with the Pardeshī who had left Calicut. The Marakkār brought products from the Coromandel coast and Sri Lanka to the western coast of India. Piero Strozzi, a Florentine present in Portuguese Asia from 1510 onward, describes the wealth of Muslim merchants from Goa, who are “worth 400,000 to 500,000 ducats”

²⁵ The Portuguese ultimately joined local networks, making “80% of their profit in the intra-Asian trade” (Subrahmanyam 1990b; Norel 2005).

²⁶ Letter by P. Ferreira Fogaça to the king, from Kilwa, in 1506 (quoted by Pearson 1998: 130). Before 1508, the king of Portugal had gone so far as to order the expulsion of Muslim merchants from the Sofala coast (Magalhães-Godinho 1969: 262).

²⁷ Magalhães-Godinho 1969: 260–262. In the south, the Swahili merchants abandoned Kilwa and Sofala, and developed the Zambezi valley, Angoche, and the Querimba Islands as alternative trade routes. The Querimba archipelago became a significant site for textile manufacture and ivory storage (see a letter by P. de Castro in 1523; Newitt 2002: 49). In 1531, the captain of Sofala created an outpost at Sena, where a Muslim village was already in place. Part of the East African trade (not the major part, as some authors have written) was redirected to Goa.

²⁸ Pearson 1998: 135ff. In addition, the Portuguese administrators preferred to work for personal gain rather than in the interest of the crown. At Sofala, in 1548, “there was not a single tusk available for the royal export monopoly on ivory, while the captain of the port was shipping huge quantities on his own account” (Findlay and O’Rourke 2007: 154–155).

²⁹ Magalhães-Godinho (1969: 265, 272) argues that a decline in the Swahili cities is noticeable around 1570, due to Portuguese actions. However, R. Pouwels (2002) and T. Vernet (2005: 70ff.) show that the Portuguese intrusion did not trigger a decline in Swahili city-state culture overall, but instead led to a restructuring of the networks that benefited the Lamu archipelago and especially the city of Pate, which took advantage of its situation at the meeting point of the Portuguese and Arab spheres of interaction.

³⁰ Pearson 1998: 138, 141. “In 1530, there was a markup of forty times the initial value between Cambay and Sofala [for Cambay cloth]. Yet the nonofficial markup was only between eight and eleven times cost price. The result was a vast ‘illegal’ trade” (Pearson 1998: 141).

³¹ In 1513, Afonso de Albuquerque adopted a new strategy, favoring Calicut to the detriment of Cochin and Cannanore; Arab merchants “fled from Calicut to the safer ports of Gujarat, Vijayanagara, Hormuz and the Red Sea.” The Maraikkayar traders of Cochin, Cannanore, and later Calicut built relationships with the Ottomans, notably from 1524 onward. In 1525, the Portuguese were expelled by the Zamorin, with help from the Māppīla (Malekandathil 2007: 270–272).

(Subrahmanyam 1990b: 7). In Southeast Asia, the capture of Malacca led to the displacement of Muslim merchants and the ascent of Johore (Malaysia), Brunei (Kalimantan), Banten (western Java), and, more importantly, Aceh (northern Sumatra), which became the dominant sultanate. Along the Indian coasts and also at the mouth of the Persian Gulf, traders moved away in order to evade the grip of the Portuguese, from Diu to Surat, from Pulicat to Masulipatnam, and from Hormuz to Bandar Abbas (Pearson 2003: 136).³²

The Portuguese presence held the emergence of some Indian dynasties in check³³ and may have prevented maritime Muslim states from developing in southwestern India. Islam served to cement the opposition to the Portuguese; this opposition fostered the spread of firearms, helped by European traffickers and support from the Ottoman power.

The pragmatism of merchants in matters of religion, however, worked in favor of the Portuguese, “who found everywhere – especially in Gujarat, with the governor of Diu, Malik Ayāz – realists willing to accept the new order.”³⁴ Nestorian Christian and Jewish merchants from Kulam collaborated with the Portuguese (Malekandathil 2007: 270–271). The latter also used Māppiḷa as “brokers and intermediaries” (Subrahmanyam 1990b: 117). Opposition to the Portuguese was not based on religious differences alone. Decided on by Dom Manuel in order to favor Goa, the stifling of Bhatkal, a port in Vijayanāgara which maintained close links with Hormuz, “was one of the causes of the revolt of Hormuz against the Portuguese in 1521–1522” (Aubin 1988: 85). Moreover, “the Portuguese had to fit into existing patterns” (Pearson 1998: 134), and they became more and more involved and “immersed” in a large and complex intra-Asian trade. The Portuguese crown, notes Subrahmanyam (1990b: 101), became “a merchant among merchants,” and the Portuguese conducted private business. At the same time, links with metropolitan Portugal became weaker and weaker. The use of the Cape of Good Hope route ultimately proved less favorable than previously thought.

The Portuguese cultural influence has also been reassessed. There was no area in which they had superiority, apart from the armament of ships (Frank 1998; Pearson 2003: 139). Toussaint has stated that “modern history really begins” with Vasco da Gama (Toussaint 1961: 2). In fact it was the discovery of the Americas (with their precious metals) and the opening up of a new ocean – the Atlantic – to global trade that were the major factors making this period a turning point. Later, during the second half of the sixteenth century, Europeans would cross the Pacific Ocean to bring American silver to eastern Asia (the Philippines became part of Spain’s colonial empire in 1565). A new world-system was taking shape, in which Europe was able to exploit the

³² Associated with Vijayanagara and the Malacca trade, the port of Pulicat came to prominence only after 1433; Ma Huan did not mention it at the time.

³³ S. Digby (1982b: 151) gives as examples the sultans of Cannanore and the Sidi of Janjirā. Founded in 1490 (by a slave of Georgian origin?), the state of Bijāpur was also an emerging power at the beginning of the sixteenth century. It attacked Goa in 1512 and around 1570, but with no real success.

³⁴ The Portuguese were also able to take advantage of local strife. They were welcomed in Malindi, and had an agreement with that city, which was at war with the rulers of Mombasa. However, that did not prevent the Portuguese from capturing ships and seizing goods of Malindi merchants “on land and sea” whenever they had the opportunity to do so (as shown by a letter from the Malindi’s ruler to the king of Portugal, c. 1520; Pearson 1998: 136).

resources of both Africa and the New World; this exploitation was the springboard for its future development (Pomeranz 2000).

The Portuguese in Madagascar

The Reconnaissance of the Malagasy Coasts

The Portuguese explorer Diogo Dias discovered Madagascar in 1500, and gave it the name of Saint Lawrence Island. On the Portuguese world map called “Cantino” (1502), however, the island is still named Comorbinam (= Comordiva?)³⁵ – Thomaz writes “Carmoboram” – “but the name Madagascar is also present, written in gold capital letters on the green of the island” (Thomaz 2009: 155). In 1506, several Portuguese ships explored the coasts of Madagascar. First the ships led by Fernão Soares and Ruy Pereira sailed along the east coast in February 1506. At the end of that year, a ship under Ruy Pereira arrived in the Bay of Saint Augustine, in the southwest – and not at the mouth of the Matatãña River as suggested by Barros (11, book 1, ch. 1) (see above). In this bay, “a sailing canoe with eighteen men aboard came to Pereira’s ship, they climbed into his ship without fear. Some of them wore silver bangles.” Pereira “took two young men with him, to give testimony to what was in this port to Tristão da Cunha. When Rui Pereira arrived at Mozambique, . . . through a Moor of Kilwa called Bogima, who was at Mozambique, and knew the language [of these two young Malagasy], Tristão da Cunha learnt many things about the wealth of the country. The natives said that their country was called Tanana, and that there was a lot of ginger, cloves, silver, and wax. And Bogima, because he had already been in this port, claimed that it was possible to load ships with ginger. These words gave the Captain great pleasure” (Thomaz, p.c.)³⁶ (see also Newitt 2002: 18).

Castanheda connects this story to João Gomes d’Abreu, who “arrived on the inside coast of the Saint Lawrence Island [Mozambique channel], at a bay now called *bahia fermosa* [‘the beautiful bay’] [probably the bay of Saint Augustine]. He found a kind of gall-nut there which smelled like cloves. It was at Mozambique that they learnt,

³⁵ Viré 1984: 22 note 2. Johannes Ruysch’s map (1507) gives “Camarocada” for Madagascar (while “Camaro” derives from the Arabic Qumr, the etymology of “cada” is unknown), and shows three islands in the east (Mascarene Islands) bearing the names Dinanoroa, Dina Robin, and Margabyn. As already noted, however, some manuscripts of Marco Polo’s book mention “Madeigascar,” and the map from Juan de la Cosa (1500) bears the name “Madagasraz.” Martin Waldseemüller’s map (1513, but prepared around 1507) indicates “Madagascar” (Suarez 1999: 113). The “Cantino” map (1502) “incorporated a lot of information on parts of the Indian Ocean not yet visited by the Portuguese from local charts, rutters and oral information” (Sheriff 2002: 219).

³⁶ According to Bras de Albuquerque, *Commentários do Grande Afonso Dalboquerque, Capitam Geral que foy das Indias Orientaes*. Unfortunately, A. Grandidier *et al.* have not provided an accurate translation of the original Portuguese texts (COACM, 1, 1903: 18). I here thank L. F. Thomaz for the data presented. As previously noted, Thomaz (2009) denied Ruy Pereira’s supposed visit to Matatãña (unlike Kammerer 1950: 37, but see Axelson 1940: 99). A tradition collected by Flacourt about the arrival of the Zaframinia in Madagascar, however, mentions a man called Geofarere (see above, ed. Allibert 2007: 158). This tradition obviously contains various anachronisms. Thomaz correctly notes that Ruy Pereira sailed only along the east coast (without stopping), and that the word “Geofarere” probably translates a Portuguese name such as Gil Ferreira (p.c.).

through people from this country, that there was much ginger on this island” (for this text from Castanheda, see Kammerer 1950: 32; Axelson 1973: 62).

The warm reception accorded Ruy Pereira, the silver ornaments that men and women wore (Tristão da Cunha sent “a silver shackle” to the king of Portugal [*COACM*, 1, 1903: 46]), and the fact that the two natives followed him “with good will” show that the people of the port where the Portuguese had arrived were used to trading with visiting ships and traveling to the East African coast.

The information collected by Ruy Pereira prompted Tristão da Cunha to explore the coasts of Madagascar in December 1506, accompanied by Afonso de Albuquerque. While the latter favored a route rounding Madagascar to the south, Tristão da Cunha insisted that the vessels should sail to the north of the island. Bogima accompanied the Portuguese, as an interpreter. The fleet led by Tristão da Cunha touched the north-western coast and captured two “Moors.” Afonso de Albuquerque writes to King Manuel:

We have captured a dugout canoe with two Moors, and we spoke to the natives of this country [south of Boina], they were Cafres, who did not understand very well the language of the people from Saint Lawrence Island whom Ruy Pereira had taken with him. (*COACM*, 11: 518)

We have here the first European testimony to the ethnic and linguistic diversity of the west Malagasy coast, which Luis Mariano would later describe in more detail at the beginning of the seventeenth century. The “Cafres” were probably Africans speaking Bantu languages others than Swahili, and the Moors were Muslims speaking Arabic or Swahili. These “Moors” taught the Portuguese a route that allowed them to go to a nearby “town” (a large village), located at the heart of a bay (whose Portuguese name was Angra de Conceicao); Kammerer, relying on Barros’s account, identifies this area with the Bay of Bombetoka. In a recent work, Hébert, using an anonymous Portuguese chronicle, suggests the Bay of Boina, at a site different from Kingany, the one proposed – with some plausibility – by P. Vérin (Vérin 1986: 171–173; Hébert 1999: 395–397). The local people, who had probably heard of the exactions committed by the Portuguese at Kilwa and Mombasa, received them with much hostility and bullied Bogima. The Portuguese then torched the village. Kingany was later abandoned in favor of the more easily defended site of Antsoheribory, on an island in the Bay of Boina.

The fleet sailed on to the north and “reached another significant place [at the entrance of the Bay of Bombetoka?], built along the bank of a river; [the Portuguese] captured the chief who was the lord of the country, who led them during the night” to the entrance of the Bay of Mahajamba, where the “capital” of the Muslims, “Lulamguane” (Lulangany), was built, on Nosy Manja Island (Barros, *COACM*, 1: 27–28). Bras de Albuquerque writes:

[it was] a densely populated island, where the king of the country had his residence, though his livestock and plantations were on the mainland.³⁷ And on commencing to explore the bay, because the people had not taken refuge, the captain-major gave orders that two boats with men should take up a position between the island and the mainland and not allow any Moors to cross

³⁷ Like the cities of the East African coast, the trading ports of the Malagasy coast were certainly connected to villages inland.

from the other side . . . When the Moors saw the determination of our people, such a panic struck them that, without fearing the boats, they came down to the beach to try to cross to the mainland on the other side, some in *zambucos* and *almadias*, some by swimming. Such was the haste they made to cross that the *zambucos* and *almadias*, owing to the great rolling of the sea (by reason of the current of water from a river which debouched there), capsized with all those on board, so that the sea was covered with dead men, women and children. The captain-major then attacked the place, and on entering it, found many Moors still there waiting with spears and shields, and he put them all to the sword. After this victory, he gave orders to sack the place, and they found a great deal of cloth, silver and gold, for the ships from Melinde and Mombasa come there to trade and in exchange for these things take away slaves and provisions. And such was the quantity of rice that twenty ships could not carry it.³⁸

The large (probably exaggerated) amount of rice discovered means that the region supplied the city-states of East Africa. The mention of slaves reveals that links existed between Langany and the interior of the island. While trade connections with the interior had existed since the appearance of the first trading ports, the significance of the slave trade was probably a new development.

Wood was another product exported: according to Diogo do Couto (1603), “the Moors carry red santal, that they call Mitisaque [?], to Cambay, where they sell it to Hindus, who use it for cremation of bodies” (*COACM*, 1: 101).

Afonso de Albuquerque, in his letter to the king, writes that in Lulangany, the Portuguese seized gold and silver rupees from Cambay, and that the booty was distributed equitably. Correia mentions a smaller haul than the one described by Albuquerque:

[the Portuguese] looted the town, with limited profit, because trade there was not substantial; it only involved Malindi and Mombaz, whose dhows used to come to trade Indian textiles (from Cambay) for slaves, wax and food.

Tristão da Cunha requested a ransom before allowing the inhabitants to go back to their looted houses. These houses were simple huts, except for the mosque and a few buildings made of stone. According to João de Barros:

The Muslims [of Lulangane] were more civilized and richer than those who inhabited other points of the coast; their mosque and most of their houses [?] were made of stone and lime, with terraces, like the buildings of Kilwa and Mombaz. (*COACM*, 1: 23)

The Moors “went back to the mainland, whence they brought back [as ransom] more than 50 small cows, 20 goats, maize [sorgho], rice and various types of fruit” (Barros, *COACM*, 1: 30). The Portuguese released a few prisoners and took away others, as slaves or guides. These guides told the Portuguese that there was no other Moor town on the coast, the other inhabitants being “Cafres,” a term that here referred to populations of African origin (the Malagasy were known as “Bouques,” Buki).

³⁸ Newitt 2002: 19. See the accounts by Correia and Bras de Albuquerque in *COACM*, 1: 15, 17. J.-C. Hébert (1999: 399 n.184) notes that the letter from Albuquerque to the king clearly indicates twenty *nãos* (Afonso de Albuquerque to the king, Mozambique, February 6, 1507, *DPMAC*, 11: 122).

The Portuguese then entered a large bay (either the bay of Anorotsangana – also called the bay of Radama – or the bay of Ampasindava?), where they burned two villages in Sada: “The two Moors that the captain-major had taken at Lulangane carried him to a large bay called Sada, which is entirely surrounded with villages of Cafres, because the principal exchange of all places on the coast of Melinde, Mombasa and Mogadishu is established there” (Newitt 2002: 20).³⁹ It is likely that non-Muslim Africans used to go to Madagascar in order to trade (the Portuguese text notes the presence of men armed with bows; the bow was an African, not a Malagasy weapon). In this port of Sada, mentioned in the Arabic naval charts, “several ships come to trade [in slaves, in] food and iron,” as Afonso de Albuquerque notes. In addition, the *Cronica do descobrimento* indicates: “[The Portuguese] finally arrived at a pleasant bay named Çada. They gathered at the mouth . . . They advanced about two miles, and saw the village of Çada, on a steep hill. [The Portuguese] arrived tired at the village, deserted by its inhabitants, then they burned it” (Carvalho 2008 150–151). Here the inhabitants of Sada who attempted to oppose the advance of the Portuguese are called “Moors.”

The “Moors” of northwestern Madagascar knew the region of the Matatãña River, and prompted the Portuguese to sail there:

As for cloves and silver, the Moors said these could not be found in this country [northern Madagascar], although it was said that on the other side of the island, in the south, the inhabitants wore silver bracelets. (*COACM*, 1: 31)

From the fleet of Tristão da Cunha, only Gomes d’Abreu, who had sailed ahead, managed to round Cap d’Ambre. He proceeded towards the southeast and arrived at the mouth of the Matatãña River. He anchored off it and was welcomed “with great pomp” by the king of this country, who presented him with a heavy chain of silver which he wore, as Castanheda notes (Kammerer 1950: 55ff.; Axelson 1973: 63). A storm arose, which prevented D’Abreu from going back to his vessel. When he failed to return, the men on the ship sailed away. Gomes d’Abreu and his companions remained as guests of the king, “who continuously showed his sympathy to them.” Soon after, D’Abreu became ill and died. Along the east coast, the ship of Diego Lopes de Sequeira, whose arrival in Anosy in 1508 has been described above, would find a survivor called Antonio among Gomes d’Abreu’s companions, and later three others “at the Matatane River.” Moreover, two men whom Lopes de Sequeira had left south of the Matatãña River for a ground reconnaissance of the coast met “two Arabs from Cambay, who had been cast ashore on the island by a storm thirty years before, in the course of a voyage to Sofala. They had been captured by the natives and all their companions had been put to death” (Castanheda, quoted by Kammerer 1950: 62).

In 1514, two ships were sent to this coast. Pedro Anes (Pedreanes) stopped at Bemaro (Vohemar) where he bought “much amber,” which was copal resin. Luis Figueira

³⁹ The translation of Grandidier *et al.* is incorrect: “The population [in Sada] was large and mainly composed of Cafres, because it was here that the slaves of the towns of Malindi, Mombaz and Mogdicho took refuge” (*COACM*, 1: 22) (account by Bras de Albuquerque). As Newitt’s translation suggests, it is likely that the inhabitants of Sada were primarily merchants – Muslims or non-Muslims – speaking a Bantu language, and coming to trade. S. Sanchez (2013: 68) has followed Newitt’s translation.

settled at the mouth of the Matatãña River, where he established a small fort; he lived there for six months, “under attacks from the natives, almost under siege and always exposed to the possible looting of his merchandise.”⁴⁰ Finding almost nothing to buy, he returned to Mozambique in June 1515. This hostility is in sharp contrast with the friendly welcome experienced by Gomes d’Abreu. It is obvious that the Muslims controlled trade, and sought to retain that control. Duarte Barbosa would later write about “Saint Lawrence Island”:

While the inhabitants of the interior of this island are pagans, those living in the trading ports are Moors [Muslims]. Both groups have many kings . . . The natives . . . do not sail to any ports [overseas]⁴¹ and do not leave their own coast, where they fish in dugout canoes . . . They are continuously at war with each other. (*COACM*, 1: 53–54; Vérin 1986: 99)

The separation between “Muslims” and pagans was probably not so clear-cut; the “Moors” living in the coastal trading towns acted as intermediaries between the “people from abroad” and the Malagasy *tompon-tany*, “masters of the earth.”

Portuguese Testimonies about Life in the Trading Ports of Madagascar

The Portuguese texts provide testimonies both on the supposed origin of the main outposts and on their organization. Diogo do Couto, recounting the exploration of the coast by Lobo de Sousa in 1557, confirms the preeminence of Langany and Vohemary:

The Moors of the coast of Malindi, who have come to Madagascar for a long time, have founded two cities there, where their descendents still live today under the authority of shaiks; one of these cities is built on an island located in the middle of a bay named Manzalage . . . and the other is on the northeastern coast in another bay called Bimaro. (*COACM*, 1: 99)

Diogo do Couto also gives a list of kings between “Manzalage” and the northern tip of Madagascar (*COACM*, 1: 100).

The inhabitants of the trading ports, “people of the sea” corresponding to the “Thalassians” described by Randles (1975: 115ff.) along the East African coast, did not form a homogeneous ethnic community; the name *antalaotse* included people of various origins. The anthropological diversity of the inhabitants of northwestern Madagascar struck Father Luis Mariano, who writes in 1613:

The natives show noticeable differences in their physical aspect and the color of their skin: some are black and have curly hair, like the Cafres from Mozambique and Angola; others are also black, but they have smooth hair; others again have a dark complexion like the mulattoes, whereas others are almost white-skinned and can be compared with the palest half-breeds; the latter are the people who have been brought from the kingdom of the Hova; this kingdom is in the very center of the island; these [Hova] people are sold at Mazalagem [Boina] to the Arabs of Malindi. Among these

⁴⁰ There is a record of this historic event in an Anakara Arabico-Malagasy manuscript published by Mahefamanana, which recounts that at the time of their ancestor Ali-Tawarath (Alitavaratra) a European called Loy Figireña arrived in the Matatãña valley; he settled on the coast for almost one year “in order to buy pepper [?], gold, and silver” (Mahefamanana 1977: 18). See also *COACM*, 1: 52.

⁴¹ Barbosa adds: “nor does anyone come to theirs,” which is contradicted by archaeology as well as by Arab and other Portuguese texts.

white-skinned people, there are some with curly hair like the Cafres, which is very strange, and others with smooth hair like us. Most of them are dark-skinned, with either curly or smooth hair. (*COACM*, 11: 12–13)

Mariano also indicates in 1617:

In this city [Mazalagem], there are many Arabs, who have built a mosque there . . . , and there are also many Malagasy people, who form the bulk of the population. (*COACM*, 11: 267)

Moreover, the Portuguese authors emphasized intermarriages with Malagasy populations. These helped the *antalaotse* integrate into Malagasy societies, and probably encouraged conversions to Islam as well. However, Mariano is not impressed by the piety of the *antalaotse*: “The Moors [= Muslims] here are . . . not very zealous regarding their religion.”

Contrasted with the processes of integration, Mariano also points to expressions of rejection from “Buki” populations who “forced [the Moors] to dwell either on islets, like King Samamo and Bimaro, or right on the coast” (*COACM*, 11: 74; see above). The supposed hostility of the “Buki,” however, refers to the political situation at this time, marked by the competition between the Malagasy king “Guinguimaro” or “Tingimaro,” settled in the Bay of Ampasindava, and the *antalaotse* rulers (see above). In fact, it is likely that the *antalaotse* chose to live on islands or peninsulas. These sites offered defensive advantages and facilities for the storage of goods and the loading of goods onto vessels. In Madagascar as in East Africa, town enclosures, when they existed, were usually larger on the land side than on the sea side: threats to the trading outposts came from the interior of the island. However, the walls were sometimes border markers and not really there for protection.

Prior to the arrival of the Portuguese, the organization of the outposts was probably similar to that described later during the early seventeenth century. Islam in the trading ports seems to have been “both simplified and egalitarian. No mosque shows any traces of *minbar* allowing the imam to rise above the community” (Vérin 1975a: 946). The king’s power was limited by the powerful role of the council of notables: the discussions of the Portuguese with the king from “Massalagem,” Samamo, show that the members of his council controlled decisions. The functioning of the Malagasy trading ports, in fact, must have been rather similar to that of many Swahili towns. The position of a notable depended both on the history of the lineage to which he belonged, and to the status he had managed to build for himself.

The mercantile society of the outposts was also home to various groups of craftsmen, such as goldsmiths and stone carvers. The Portuguese texts and the many discoveries of spindles (at Kingany for example) reveal the importance of textile manufacturing, using raffia (from both the west and the east coasts) and wild (or perhaps cultivated) cotton. The fabrics manufactured were probably partly destined for trade with the interior, as was the case on the East African coast.

The Portuguese would later maintain trade links with northern Malagasy towns. João dos Santos, who sojourned in Mozambique during the late sixteenth century, writes that each year, a ship left the island of Mozambique to go and fetch cattle, goats

or sheep, amber, slaves, and woven cloth made of raffia (João dos Santos, Book III, ch. 19, Poumailloux 2002: 314).

In sum, the Portuguese presence had only a limited impact on Malagasy societies. However, it probably helped slow down the process of swahilization of part of the island's coasts, and cut off some of the merchant communities, for example at Ambohabé, from the Indian Ocean networks.

Epilogue

We must think big: otherwise, what is the point of history?
(F. Braudel, letter to his wife, February 15, 1941)

To attempt a reconstruction of over 5,000 years of Ancient World history has obviously meant “putting on seven-league boots,” to use Braudel’s metaphor.¹ It was necessary, however, to take into account networks and statebuilding on the scale of oceans and continents and over the *longue durée* in order to come to grips with the formation and evolution of immense areas that would become unified and hierarchized, due to commercial, religious, and political exchanges. The Indian Ocean was key to this history. Like the Mediterranean Sea as described by F. Braudel (1949), very early on, the Indian Ocean was traversed by ships, loaded with ponderous and/or precious goods.

Everything truly began with the birth of the state and the first cities, in Mesopotamia and in Egypt, and later in the Indus valley and China. The Bronze Age and the Iron Age saw the first processes of globalization, impelled by expanding exchange networks. At the end of the first millennium BCE, intensified exchanges, and more specifically long-distance trade, led to the progressive integration of various regions – from China to the Mediterranean, and from South Asia to East Africa – into a single world-system connecting Asia, Europe, and Africa. In this area, where events and regional developments appear to have been interdependent, the Indian Ocean occupied a central position. The evolution of the system’s various parts arose from a simultaneous combination of local, regional, and global dynamics: the transdisciplinary and systemic approach adopted in this text is an attempt to shed light on the processes of interaction and organization operating between the system as a whole and its parts. The Afro-Eurasian world-system developed along a series of economic and political cycles lasting several centuries. It consisted of successive phases of globalization and recession of networks, each driven by its own set of forces. Each recession went along with a restructuring of the system’s exchange networks and hierarchies, induced by both geography and history. At all times, the global expansion of exchanges was combined with statebuilding and the rise of a private sector: these were at times in competition, but often united in collaborative relationship, and sometimes in symbiosis. It is precisely this symbiosis which led to the development of capitalistic practices in various regions. This occurred notably in Europe from the thirteenth century onward, before the emergence of a true capitalistic mode of production in this region in modern times.

¹ Braudel 1979, II: 494.

The First World-Systems

The “Urban Revolution” appears as a continuation of the Hassuna-Samarra period and the Ubaid periods which followed it (sixth and fifth millennia BCE). This Urban Revolution began in Mesopotamia (fourth millennium) and in Susiana (fourth millennium). It can then be traced in Egypt (late fourth millennium) and India (third millennium). It was the result of progress in agriculture, crafts, and trade, benefiting from the possibilities offered by great rivers (the Euphrates and the Tigris; the Nile; the Indus). The human drive to dominate nature, permeating Mesopotamian mythology, was accompanied by the human need to dominate other humans. An accumulation of surpluses and their control by elites were crucial to the emergence of cities and of the state, as was the drive to control exchanges and manipulate the symbolic. Surpluses and trade routes had to be defended but could also be captured, thanks to the setting up of efficient military institutions. The appearance of cities also meant the formation of the city-state, in Mesopotamia, and the “country-state” in Egypt.²

The birth of the state introduced a radically new division of labor, within societies and between regions.³ In Mesopotamia, as early as the Urukian period (fourth millennium BCE), the rise of city-states and exchange networks with neighboring regions may have led to the founding of the first world-system, whose core was southern Mesopotamia. This system included at least some of the Persian Gulf (Algaze 2001). The Urukian space probably exported textiles and other manufactured objects, and imported mainly raw materials (metals, wood, stones) and slaves. It was indirectly connected with another world-system centered on Egypt, the seat of a relatively stable country-state as of the end of the fourth millennium, following its political unification (Baines and Yoffee 1998; Chase-Dunn *et al.* 2006).

Mesopotamian progress and innovations were certainly crucial to the development of the entire Ancient World. For K. C. Chang (2000), Mesopotamia was the only great civilization that undertook statebuilding – as early as the Urban Revolution – which was based not only on control over new production techniques and long-distance trade, but also on the use of writing for largely economic purposes – as well as the setting up of “territorial societies prevailing in importance over the original clans and lineages in the regulation of interpersonal behavior.” From this arose the idea of an original western breakout. “The modernization of the developing world of today may be seen as an effort – definitely belated and possibly not yet thought through – on the part of the rest of the world to catch up with the West in a fundamental realignment of cosmology, as well as in technology, after a bifurcation more than five thousand years old” (Chang 2000: 10). Chang also notes the importance in Mesopotamia of “a cosmology that emphasized the separate existence of gods, granted them creative powers,” as well as the promotion of “powerful temples independent of the state,” a disputable interpretation. “These factors for change,” Chang points out, “became enshrined as the universal elements of

² Hansen 2000a: 16. Hansen proposes that the term “country-state” or “macro-state” be used instead of the term “territorial state,” because a city-state always controls a territory.

³ Various authors have envisioned the existence of world-systems prior to this period; however, it was only (networks of) city-states and territorial states that could lay the foundations for a significant transregional division of labor.

a civilization stereotype” (2000: 10). Renfrew (1972: 11) thus writes: “the civilized man lives in an environment very much of his own creation, which he has fashioned to insulate himself from the primeval environment of nature alone.” “This concept of the first civilized society,” emphasizes Chang, “is fundamentally at odds with the ancient Chinese reality of a layered but interlinked world continuum, in which privileged humans and animals roamed about from one layer to another. Chinese civilization focused on those instruments that enabled this interpenetration of layers in the world continuum” (2000: 5–6). “The civilization of ancient China was founded on an ideology completely different from that of Egypt or Mesopotamia. It showed a continuation of the cosmology of the first societies of hunter-gatherers, in which the monarch replaced the shaman in his personal and exclusive relationship with the divine powers” (Graeber 2005).

The existence of a transregional integration as early as the fourth millennium has been questioned by various authors. With regard to the periods prior to the first millennium BCE, it is true that the world-system model faces major constraints. How can we interpret data that are too often deficient or patchy? Because of the limits imposed by archaeology and available texts, we can perceive only trends and, more rarely, apprehend dependencies. The debates surrounding various chronologies for the third and second millennia (Gasche *et al.* 1998; Warburton 2007b; Reade 2008) clearly indicate that the phases of growth and recession put forward for some areas are often mere hypotheses. However, we can observe two permanent “cores” in Mesopotamia and Egypt, and we note changes in the extension and structuring of exchange networks. From the fourth millennium BCE onward, the term “Bronze Age” seems appropriate if we consider the significance of this alloy and of supply networks in copper and tin. Six cycles can be seen for western Asia (3600–3100; 3100–2700; 2700–2150; 2150–1900; 1900–1600; and 1600–1000 BCE) and four for Egypt (3100–2700; 2700–2030; 2030–1560; and 1560–1000 BCE). These cycles reacted to climatic variations which contribute to forming an integral part of a “systemic logic” (see Figure Ep.3).⁴ Each period created a new interregional division of labor, in partial continuity with the previous period, with oscillations between competing regions. One example is Mesopotamia, which appears to be separated into two regions: southern Mesopotamia and northern Mesopotamia; during part of the Bronze Age, western Asia was therefore structured as a multi-centered core showing an alternation in power among several centers (Beaujard 2011a).

The Uruk system disintegrated and was restructured toward the end of the fourth millennium, and Iran became a distinct politico-economic area for four centuries (the Proto-Elamite period). During the first half of the third millennium, the Asian world-systems were turned toward the Persian Gulf, whence Mesopotamia received copper, and toward Inner Asia, which provided tin and lapis lazuli. The Indian Ocean had not yet become a unified area; nevertheless, in its western part, between 2600 and 1900 BCE, a world-system did link the urbanized civilizations of Mesopotamia, Elam, and the

⁴ These climatic changes were linked partly to variations in solar radiation. Cycles of variable duration can be observed. O. M. Raspopov *et al.* (2008) point to the existence of a 210-year solar cycle (the “De Vries/Suess cycle”), which was superimposed over a 87-year cycle (the “Gleissberg cycle”), engendering cycles of longer duration (see above). Moreover, Usoskin (2013: 68) shows the significance of the 11-year “Schwabe cycle.” Researchers have also shown the existence of the 2,300-year Hallstatt solar cycle, and of 1,500-year cycles (see Brooke 2014: 175ff.). On links between the environment and the notion of ecosystems, see Morin 2005.

Indus, via the maritime routes of the Persian Gulf and land routes extending as far as Turkmenistan and Bactria.⁵ New forms of statebuilding and an apparent unification of religious beliefs combined with increasing exchanges and internal developments – all were marked by the spread of bronzeworking⁶ and textile production. The first empire known to us is, Akkad, founded *c.* 2340 (MC); it attempted to link the networks of the Persian Gulf with those of the Mediterranean. A phase of global climate change from 2200 to 1900 BCE may partly explain the disappearance of this empire around 2200 and that of the Indus civilization at the end of the nineteenth century BCE. The expansion of the Bactria-Margiana Archaeological Complex (BMAC) also contributed to the collapse of the Indus political entities (Hiebert 1994; Staubwasser and Weiss 2006), as did tectonic movements, ecological imbalances, and a decline in long-distance trade.⁷

The area stretching from Mesopotamia to the Indus was in indirect contact with Egypt via Mediterranean routes going through the Levant, and perhaps a route circumventing South Arabia and following the Red Sea.⁸ The weakness of the links between Africa and Mesopotamia during the third millennium, however, renders improbable the hypothesis of Egypt's integration into the western Asian world-system, as set forth by Frank and Gills (1993c: 82). At least prior to 1900 BCE (see Figure Ep.1),⁹ Egypt and Mesopotamia do not appear to have evolved in synchrony.

Who took charge of organizing production and the exchange networks? As early as the Uruk period, the public sector introduced innovations that would lead to entrepreneurship (Hudson 1996). Combined with a standardization of weights and measures, writing became a powerful technique for rationalizing activities. The appearance of systems of account gave the state the basis for an efficient organization that fostered social complexity. The accumulation of capital, along with a search for profit, were concepts developed within public institutions. These were crucial to the development of a money of account; involvement in trade by temples and palaces probably explains the emergence of their monetary role, with silver rising to preeminence due to its religious dimension and its place in temple contributions (Hudson 2004c).¹⁰ A search

⁵ Expanding trade benefited from improvements in ships as well as from animal domestication: the donkey in Egypt and in western Asia during the fourth millennium BCE; the camel in Central Asia; and the horse on the Eurasian steppes during the third millennium BCE. While D. Warburton (2003: 173) is correct in challenging the idea according to which long-distance trade was necessarily conducted along a chain of intermediaries (a “down-the-line” exchange), he mistakenly denies the importance of innovations, particularly in the field of transport.

⁶ A. Sherratt (1994b: 338) has aptly pointed out the multiple uses of bronze and its usefulness in various kinds of transactions: this sheds light on the importance of this alloy in the developments of this period and its link to power. Chiefs monopolized metalworking, “for by so doing they controlled the convertability” of the metal (Sherratt 1994b: 338).

⁷ The ultra-short chronology suggests a dating between around 2200 and 2060 BCE for the Akkadian Empire.

⁸ The networks may have stretched as far as East Africa, if the pendant found at Tell Asmar, near Baghdad, and dated to 2500–2400 BCE, is really made of copal.

⁹ The world-systems of Pre-Columbian America are not taken into account in Figure Ep.1.

¹⁰ D. Warburton (2003) aptly points out that markets developed earlier than the state; however, does the notion of “market” cover the same reality before and after the birth of the states and the development of monetary practices, and before and after increases in production and trade due to technological progress? Curiously, Warburton denies their significance. He puts forward market forces, without acknowledging that the birth of the state introduced a radically new division of labor within states, and within the context

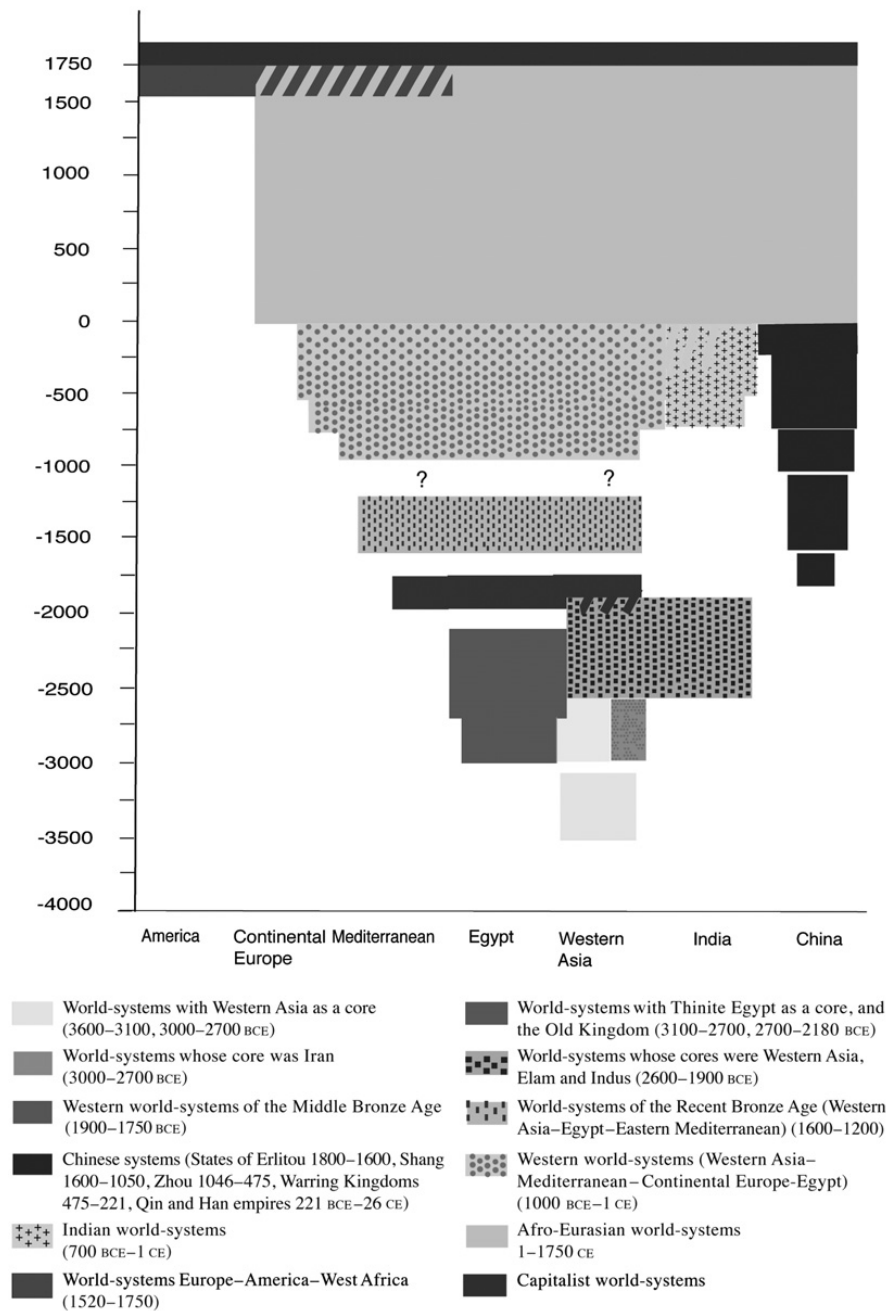


Figure Ep.1 The Asian, African, and European world-systems from 3500 BCE to 1750 CE

of various incipient world-systems. In addition, did early markets really have the ability to set prices with the efficiency Warburton attributes to them? This author probably underestimates the power and role of the state, as well as various institutions' protection of some sensitive markets. Palaces and temples played a crucial role in the emergence and regulation of markets, and in the development of money, for example by standardizing weights and measures (cf. Hudson 2004b). While Warburton argues that "market phenomena [were not] directly linked to the states" (2003: 127), this statement certainly requires qualification. Even during the second millennium BCE, it was not just market forces that determined production and distribution.

for profit originated in the state sector before being privatized. “Political (and religious) power served as matrices for private actors” (Norel 2009b: 223). A land market appeared in northern Sumer during the third millennium, emerging from the ruling political sector at the same time as did kingship, which itself was a privatization of state power for the profit of a single man or “house.” The granting of lands to officials in exchange for services; the introduction of the practice of land renting; and the existence of interest-bearing debts; all were crucial to the processes of privatization and the development of money, whose negative effects were partly counterbalanced by debt cancellations periodically edicted by rulers (Hudson 1996). Loans with interest and the practice of measuring work-time had already appeared during the Fara period (2600/2500 BCE), as had a taxation system.

Palaces and temples were thus deeply involved in the progress and regulation of the markets, and in the development of the use of money. However, against the old vision of a state totally controlling production and exchanges,¹¹ many researchers today posit concepts such as an early flowering of private entrepreneurs; the practice of land sales (as early as the mid-third millennium) and the existence of markets with fluctuating prices. Yet the emergence of markets for factors of production (land, labor, and capital), a prerequisite for the formation of a “system of markets,” made slow progress over the centuries (Norel 2004).¹² Instead of the omnipotence of “tributary systems” that is often described, we observe the coexistence and interweaving of the state and private sectors (even in the Ur III Empire, which was bureaucratic and centralized), with changing situations between these sectors and the development of a form of “state capitalism”: as Braudel has pointed out (1983, vol. 11), the history of market development is probably not “simple and linear.”

Whereas the state appears to have played a major economic role in western Asia during the third millennium, by the beginning of the second millennium BCE, political fragmentation accompanied progress in both the private sector and markets in southern Mesopotamia, Assyria, and in the Assyrian outposts of Cappadocia. The merchant community may have been a new institution on the political and economical landscape:¹³ sometimes agents of the state, but often private entrepreneurs, the members of this community founded family firms or entities resembling hierarchized guilds. The state itself displayed a true entrepreneurial spirit from the Akkadian Empire and the Ur III dynasty onward (2112–2004 BCE) (MC), especially in its production of textiles for export. Unlike the Polanyian view, it seems obvious that long-distance trade developed, in part, in search of profit. “Ports-of-trade” were not places for “commerce without market.”¹⁴ The tablets found in Cappadocia reveal the existence of bankers; the use of credit; the practice of loans with interest; and “the use of bearer

¹¹ The degree of the state’s involvement in irrigation, in particular, is still debated.

¹² Cf., however, Silver 1995: 126, for land markets. The existence of wage labor is well attested in Mesopotamia and in Egypt during the second half of the third millennium BCE (Silver 1995: 135ff.; Glassner 2001: 62, 69n. 3).

¹³ It may be that limited existing data distort our view: according to various authors, the differences between the third and second millennia are not as significant as is commonly assumed.

¹⁴ “The material which Polanyi tried to employ to demonstrate the absence of markets was in fact the very best illustration of market activity in the ancient Near East” (Warburton 2003: 151).

notes.”¹⁵ At the same time, we observe a partial “privatization” of the administration and the growing use of hired workers, for example during the Old Babylonian period (Silver 1995: 138; Glassner 2002: 148).

For Egypt, the state’s role had been primordial since the Old Kingdom, when a taxation system had been put into place; technological innovation (the invention of writing, and irrigation systems) and state-stimulated demand each played a fundamental role in economic growth. This policy would be pursued until the reign of Ramses III during the twelfth century BCE (Warburton 2000a: 92).

After the collapse of the Indus civilization,¹⁶ the interlinkages between western Asia and India disintegrated, but a new world-system took form, uniting western Asia and Egypt. This world-system of the Middle Bronze Age (1900–1700/1600 BCE) expanded into the eastern Mediterranean and northern Africa. Connections were made with the Horn of Africa, with South Arabia acting as an interface between the Horn of Africa and South Asia. Various cultivated plants of African origin were introduced into India toward the end of this period (Fuller 2006). From 1750 BCE on, a combination of climatic changes, invasions, and internal conflicts led to the dislocation of this system, following a new attempt – by the Babylonian Empire of Hammurabi¹⁷ – to connect the Persian Gulf and the Mediterranean.

For this ancient period, the eastern Indian Ocean does not seem to have been connected yet to the developing western world – a matter that is still poorly understood. If confirmed, the discovery of cloves at Terqa dated to 1700–1600 BCE, in the Middle Euphrates valley, would show, however, that contacts did exist between the Austronesian world and the western Indian Ocean as early as the second millennium BCE. Austronesians were probably involved in transporting bananas of the plantain type (genome AAB) to Africa around the beginning of the first millennium BCE (Blench 2009). Here it is useful to stress the importance, too often forgotten, of smaller coastal communities (not only of states) in ancient Indian Ocean exchanges (Boivin and Fuller 2009: 33).

From 1600/1500 BCE, during the period that is usually termed the Late Bronze Age, a system with multiple cores (the Hittite kingdom, Mittani, Assyria, the Mycenaean space, and Egypt) took form around the eastern Mediterranean Sea.¹⁸ At that time, the Persian Gulf played only a limited role: the center of gravity had shifted toward the northwest, prefiguring the developments of the first millennium BCE. It is significant

¹⁵ Veenhof 1999: 57ff., 83. The search for profit is clear in many texts. “Payments to the holder of a tablet” are documented during the eighteenth century BCE in Babylonia. Forms of long-term partnership and the existence of contracts of the *commenda* type have allowed comparisons to be made with what would later be observed in the medieval world. Studies show rapid shifts in prices for commodities such as tin, textiles, and grains, with the Assyrian trade showing the adjustment of supply to demand.

¹⁶ If we adopt the Ultra-Short Chronology, this collapse becomes concomitant with the demise of the Ur III Empire.

¹⁷ According to the Ultra-Short Chronology, however, this empire was built up from 1704 BCE onward, thus during a phase of decline associated with climatic deterioration (this was also the case for the Akkadian Empire, within the framework of this Ultra-Short Chronology).

¹⁸ Due to the absence of true urbanization and of a clear transregional division of labor, the spheres of interaction in continental Europe are not viewed as systems or parts of a system prior to the first millennium BCE.

that exports of Cypriot copper grew as of the eighteenth century BCE, at a time when Omani copper was no longer transported to Mesopotamia. The way in which exchanges were organized remains a topic for debate: do we see a burgeoning private sector, or state control? In the case of Egypt, many authors maintain that its economy was administered by an omnipresent state, but here too, the place taken by the private sector is under reevaluation, notably during its “intermediary periods” – when decaying state structures allowed for the emergence of private initiatives – and during the New Kingdom, when the private sector appears to have complemented a more recently decentralized state (Warburton 1997). At this time, Egypt’s growing integration into a transregional market led to the formation of a cosmopolitan society, particularly in the Nile delta.

In eastern Asia, during the third millennium, local processes and expanding long-distance trade went along with the birth of complex hierarchized societies in the basins of the Yellow River and the Yangtze. Urbanization started around 2500 BCE in a relatively autonomous manner. However, bronze metallurgy, which appeared at the beginning of the second millennium BCE, benefited from Central Asian inflows. From the early second millennium BCE onward, interrelated cultures (the Andronovo complex) developed in the steppes from China’s borders to the edges of Europe; products and people moved along the routes of the oases and as far as Henan (Fitzgerald-Huber 2003; Frachetti 2004). Advances in agriculture, increasing exchanges, and growing competition all stimulated the transformation of chiefdoms into states, as did the appearance of writing during the second millennium in the Yellow River valley. This was linked primarily to control over the religious and symbolic fields (Chang 2000). A first eastern world-system took shape, centered on the Erlitou (1800–1600) and then Shang (1600–1027) states, which showed the same determination to control resources and the trade routes (Liu and Chen 2003). Flourishing regional cultures were evidence of local developments boosted by links with the Shang core and growth in long-distance trade toward Southeast Asia and southern Asia (state of Sanxingdui, in Yunnan), and along the routes of Central Asia and the northern steppes. Growing trade with the south of the continent led to the transfer of copper and bronze metallurgy toward Lingnan, the Mekong, the Red River and Chao Phraya basins, and toward Upper Burma (Higham 1996; Liu and Chen 2003).

Gills argues that “Chinese ‘cities’ joined the [western Asian] nexus perhaps as early as 1500 BCE via central Asia”;¹⁹ however, China’s exchanges with Central Asia do not appear to have been intense enough to lead to a true connection on the part of eastern Asia with the world-system centered on western Asia. This said, we do observe increasing interactions, marked by the introduction of the horse-drawn cart into China, an innovation that made its first appearance around 2000 BCE in the Caucasus region and spread into the Eurasian steppes.

¹⁹ Gills 1995: 142. By contrast, A. G. Frank and B. K. Gills (1993b: 85) place the inclusion of China in the world-system at the end of the Zhou period (mid-first millennium BCE).

Toward the Formation of an Afro-Eurasian World-System

The western world-system of the Late Bronze Age collapsed following invasions and migrations during the thirteenth-twelfth centuries: these combined with internal conflicts, amid global cooling. It seems clear here that a “margin” can affect an entire system and contribute to its dislocation (A. Sherratt 1993). The growth of “decentralized commercial networks” also facilitated the systemic collapse of the Late Bronze Age (S. Sherratt 2003). In China, the Shang state came apart toward the end of the second millennium BCE, giving way to the Zhou kingdom, one that was more fully based on agriculture (Deng 1999).

The dislocation of the copper and tin routes probably worked in favor of the boom in iron metallurgy, a major phenomenon at the turn of the second and first millennia BCE. Initiated by climatic change, increasing trade and social transformation, pastoral nomadism developed in the steppes and played a significant role in the restructuring occurring at this time, especially by promoting the spread of iron metallurgy toward India and China. The development of this technology prompted the manufacture of new tools and weapons, allowing advances in agriculture and increased war-making capabilities. Four poles emerged in a rebuilt western world-system: Assyria, Egypt, Anatolia, and the Levant (Beaujard 2010). A Phoenician expansion started during the tenth century BCE. Contacts with South Arabia initiated the formation of an alphabet and the process of urbanization in this region. In China, the Zhou dynasty created a new state around 1027 BCE. A period of cooling led to movements of populations in the steppes and to a recession of these two western and eastern world-systems between 850 and 750 BCE.

The period between the eighth and fifth centuries was a crucial one, due to technological and institutional innovations. The Assyrian and later Babylonian empires organized themselves into provinces. The development of the Phoenician alphabet, later borrowed by the Greeks along with the concept of the *polis* (Niemeyer 2000), provided the basis for a transformation of relations between individuals and political powers.²⁰ The Greek cities developed the concept of citizenship. The emergence of what historians have termed an “economy with market(s)” (Bresson 2000; Migeotte 2007)²¹ occurred in connection with the concept of freedom of thought, in turn leading to reflections on the world, on city governance, and even on divine laws. The Mediterranean area expanded and structured itself on the fabric of the Phoenician and Greek networks,²² in which

²⁰ The invention of the alphabet, however, goes back to seventeenth-century Hyksos Egypt. While the complexity of ancient scripts went along with the limited number of their uses and users, the simplicity and the efficiency of these alphabets transformed not only their social function, but also relationships between individuals and various powers. See also Goody 1996: 47.

²¹ Bresson (2000) writes of an *économie à marché*. Migeotte (2007) proposes the term *économie à marchés*, a proposal that translates roughly as “economy with markets”: at that time, markets for factors of production and markets for goods were still weakly interrelated, as pointed out by Maucourant (2008). P. Norel (2004: 102) notes that a land market and even a labor market developed, although slavery remained a significant feature of the economy.

²² Assyria helped Phoenicia to expand from 800 BCE onward, due to the Assyrian demand for luxury goods and metals, which were either exchanged or extorted. A number of the innovations implemented by the Assyrian Empire were borrowed from the Levantine coast. Assyria and Phoenicia are thus good examples of synergy between two cores.

private entrepreneurship proved vital. Trade developed in the Greek cities, in connection with production adapted for specific markets. This trade was founded on the activity of independent merchants and not firms or merchant princes linked to the state and the temple. The use of seals on lumps of metal was a practice already implemented by palaces, temples, and merchants, and known since the early second millennium BCE. Coinage, an extension of this use of seals, appeared in Anatolia (Lydia, Ionia) and in China during the eighth and sixth centuries BCE, and later spread to Mesopotamia, Persia, India, and Greece. Its use was accompanied by the setting up of banking systems. Picking up a Mesopotamian innovation from the second millennium BCE, Greek bankers issued credit notes which merchants could cash in other cities. Custodian banks, where actual money was deposited, were probably a Greek innovation.²³

Economic growth brought new political crystallizations with it: the successive formations of the Assyrian Empire (eighth century) and the Babylonian Empire (610–539 BCE) were the first attempts at occupying the entire area between the Mediterranean and the Indian Ocean, and at controlling the Arab caravan trade. These attempts led to closer links between the spheres of the Mediterranean Sea and the western Indian Ocean. The symbiosis between the temples and external businessmen was a continuation of practices known since the second millennium BCE; by contrast, the deployment of “capitalistic” firms, such as the House of Egibi, working with the state, and the increasing monetization of the economy were new phenomena.²⁴ Moreover, the Babylonian upswing marked a turning point in Mediterranean history: Babylon’s control over the Phoenician city-states led to a decline of the Levant, which in turn hastened the emancipation of Carthage and fed Greek expansion.

The flourishing of urbanized states in the Ganges valley and central India was another major feature of this time. An Indian world-system took shape, linked to western Asia via land and sea routes. While the western and eastern Indian Ocean were still separate areas prior to the first millennium BCE, a process of integration of the various Asian regions began during the sixth century BCE. Aromatics such as cassia and cinnamon reached the Persian Gulf and entered the Greek world. Central Asia slowly evolved into a major axis of the Eurasian area (Christian 2000). The sixth century saw the flourishing of the Persian Empire in western Asia. The Persians captured the lands between the Mediterranean and the Indian Ocean – Egypt included – and took control of all trade routes reaching as far as Central Asia and Pakistan. The organization of satrapies reflects an innovative vision of the state that allowed Persians to form the first true “universal empire.”

In eastern Asia, progress in iron metallurgy and global warming after 800 BCE worked in favor of agricultural advances underlying the process of urbanization during the “Spring and Autumn” period. A new phase of political concentration occurred during the second half of the fifth century BCE, during what is known as the “Warring States” period. As was the case in the Greek world, competition encouraged institutional innovation, marked by a mutation of the state that was influenced by the legists’

²³ See, however, Silver (1995: 115; 2004: 72) for Egypt and Mesopotamia.

²⁴ Silver 1995: 112; Glassner 2002: 149; Joannès 1999: 176, 179; 2005: 46–47.

school; competition also boosted technical progress, particularly in the metalworking industry (a process for producing steel, the invention of the crossbow, and so forth). From China to the Mediterranean, one notes a change of scale in interconnections as well as major social transformations; Jaspers (1953) called this era the “Axial Age.” Social changes gave rise to new views on the universe and on society, all of which went hand in hand with emerging individualism. We see this in the sudden appearance of the great philosophical and religious doctrines claiming universal truths (Jainism, Buddhism,²⁵ Confucianism, Mazdeism).²⁶ The emergence of the individual was also accompanied by the flourishing of rationalist humanism and democratic institutions in the Greek world; a scientific current in China (the Mohists);²⁷ and political rationalism in India (the setting down in writing of the ancient parts of the *Arthasāstra*).²⁸ In the economic domain also, a new rationality emerged, albeit still limited by institutional constraints and by political and religious control (Maucourant 2008).

The late fifth and early fourth centuries BCE were a time of hegemonic transition in the eastern Mediterranean world, in which J. Friedman discerns parallels with what can be observed for phases of transition in the capitalist world-system from the fifteenth century onward. These were marked by financial expansion and a transfer of capital from the previously dominant center toward emerging centers (Friedman 2005; Arrighi 1994). Production decreased in the Greek city-states, but Athens increased its production of silver in order to buy the goods it needed and to pay for its war expenditures; Greek artisans and mercenaries left the city-states to travel to western Asia, Egypt, and Macedonia, a semi-periphery that would become the birthplace of a new empire. Making use of the Persian example, the Greek Empire built by Alexander and his armies during the fourth century BCE linked the Mediterranean Sea with the western Indian Ocean, and created new cities at the nodes of merchant networks. The dislocation of the empire following Alexander’s death led to the formation of competing states, within a growing western world-system connected to northern India. The Seleucid and Ptolemaic empires formed the cores of this western system. As had been the case in China since the fifth century BCE, the arms race provided a stimulus for technical research that also benefited agriculture. The western world-system expanded into Europe and Africa. South of Egypt, the flourishing of the Meroe kingdom thus reveals the incorporation of new regions of Inner Africa into the system; it also points to the connection of the Horn of Africa with Arab and Indian

²⁵ The first discussions on the concept of reincarnation also occurred at this time, in the Hindu texts of the *Upanishads*.

²⁶ M. Liverani also notes (2014: 574) a more “direct connection between the human and the divine sphere” at this time. He rightly points out that “the other great legacy of the Axial Age is the rationalization and secularization of knowledge . . . The emergence of moral concerns in religion and the rational aspects of knowledge can be linked to the emergence of the individual” (2014: 574). Judaic monotheism may have appeared earlier, during the late second millennium BCE, but it developed from the seventh century onward. Cultural changes during the Axial Age often “developed along the margins or even against empires,” within the context of smaller competing states.

²⁷ The school of thought of the Mohists would not enjoy the same posterity as the school of thought of the Greek rationalists, due to different social and political contexts (under a powerful Chinese central state, marked by Confucianism).

²⁸ According to C. I. Beckwith (2011: 75), nomads from Central Asia may have helped transmit new ideas between East and West.

Ocean trade. Despite a prohibition edicted by the Arabs and the Indians seeking to prevent Alexander's explorers from sailing eastward from the Bab el-Mandab, at the mouth of the Red Sea, and beyond the Ras Musandam, at the Strait of Hormuz (Salles 1996a: 264) the Greeks and their partners (Egyptians, Phoenicians, Israelis, and Mesenians) did succeed in penetrating existing networks and in creating those of their own, especially during the third and second centuries BCE. This paved the way for the great Indo-Roman trade of the first century CE.

The end of the fourth and third centuries BCE also marked a phase of growth for India, where the Mauryan Empire was formed soon after Alexander's retreat from the Indus region. This empire promoted the spread of Buddhism and trade, especially toward Southeast Asia, where one observes radical changes helped along by the introduction of ironworking and a booming trade from 500 BCE onward (Wisseman Christie 1995). In addition, the rise of a Greek-Bactrian kingdom around 250 BCE shows the vitality of Central Asia, a region that served as an interface between India and the West. The collapse of the Mauryan Empire in 185 BCE was not unrelated to the weakening of the Seleucids and the restructuring of networks from Iran and Central Asia. The Mauryan Empire flourished and disappeared in sync with the rhythm of the western world-system: the Indian and western systems seem to have been partially unified during this period.

The western world-system experienced a new phase of hegemonic transition during the second century BCE, marked by a decline of the Egyptian and Mesopotamian cores, which had been weakened by incessant war and internal conflicts. The system's center of gravity shifted westward, and Rome became the foremost power, after eliminating Carthage. Climatic changes also affected the entire Ancient World: they induced movements of population in Central Asia and northwestern India. The formation of a Xiongnu state in the eastern steppes, however, was another cause of these movements. The Xiongnu emergence itself was the aftermath of changes occurring in China. These nomads from the steppes were not only intermediaries; they also provided horses, crucial to the Chinese army.

At this time, China was expanding, and thus not synchronized with the western phase of recession.²⁹ The reforms enacted by legists in the state of Qin brought about a centralized state with an efficient administration and a powerful army. The Qin king Shi Huangdi unified China in 221 BCE. His excesses led to his dynasty's downfall. The empire of the Former Han followed the Qin Empire in 206 BCE. The Han Empire extended toward Central Asia on the one side, and Yunnan and Vietnam on the other, favoring the rise of terrestrial and maritime "Silk Roads." Political expansion went along with technological progress, such as the development of iron moldboard plows, water mills, and the invention of paper. Benefiting from increasing trade, advances were made in shipbuilding techniques, especially in Southeast Asia. Austronesians sailed to the coasts of China, eastern India, and Sri Lanka. Cloves from the Moluccas reached the Chinese court during the second century BCE. A vast Asian world-system with China at its core was clearly developing at this time. It was connected to the

²⁹ Surprisingly, A. G. Frank and B. K. Gills (2000: 12) argue in favor of simultaneous phases for eastern and western Asia as of the mid-first millennium BCE. See also Chase-Dunn and Hall 1997: 219.

Indian world-system and the western world-system, where the competition that had arisen between the Persian Gulf and the Red Sea now turned in its favor: from the second century onward, the emergence of the Parthian Empire and political instability in Bactria-Margiana rendered the routes between India and the Red Sea more attractive than those through the Persian Gulf.

These developments herald the turn of the first century CE. At this time, the interconnections among the various networks, along with the existence of regular, significant trade, led to the founding of a single Afro-Eurasian world-system³⁰ in which most of the regions became synchronized for the first time³¹ and showed a transregional division of labor. Three regions acted as cores and “growth engines” in building the networks extending from the Mediterranean to the China Sea. In the west, the Roman Empire – which had taken control of Egypt and the Levant during the first century BCE – built itself primarily on military power: its functioning was largely based on servile labor and its ability to acquire slaves. It was an empire also built on the development of a law of universal value, and an extension of Roman citizenship. Unlike the Greek cities during the fifth and fourth centuries BCE, Rome’s productive and commercial sectors appear to have often depended upon the political power in place. At the same time, during the Republican period, the Roman administration relied on private resources as well. The significance of slavery helped limit division of labor and innovation – albeit to a lesser extent than has often been described. The empire of the Former (or Western) Han, by contrast, did not rely as heavily upon slavery and benefited from significant technological breakthroughs, which added to institutional and ideological innovations. This state interfered in its economy to a greater extent than the Roman Empire tended to do; nevertheless, a new class of private entrepreneurs emerged alongside a powerful state sector.³² Parallel to their military expansions, into Tonkin and Central Asia, the Han maintained active commercial and diplomatic policies. Between these two empires, Roman and Han, various

³⁰ Africa was gradually incorporated into African and Eurasian spheres of interaction or systems: as of the fourth and third millennia BCE, the Red Sea coast and the Horn of Africa, within a system centered on Egypt and its hinterland; as of the second millennium BCE, northwestern Africa, within the Mediterranean area; around the first century CE, eastern Africa, within the global world-system forming at this time; and, during the first millennium BCE, sub-Saharan Africa, within the Mediterranean and Egypto-Nubian spheres (here, the development of the Garamante culture around 800 BCE is significant as an interface between the Mediterranean and sub-Saharan Africa).

³¹ Braudel has already acknowledged the integration of the Roman Empire within a global world-system: “The much-vaunted empire . . . was only one part of an ancient world economy much greater than itself, which would outlast it by centuries. Rome was a link in a vast trading zone stretching from Gibraltar to China, a *Weltwirtschaft* in which men had traveled for centuries along interminable routes” (2002, II: 557). See also Glover 1996: 368 and McNeill 1998b: 129. The earlier formation of a unified Asian area can be contemplated (see Bentley 1993: 29ff.). It is clearly difficult to establish from which threshold of integration different world-economies linked to one another constitute a single system.

³² As previously mentioned, a private sector was expanding under the Eastern Han. W. Scheidel (2009) has shown the “convergence” of the Roman and Chinese systems from quite opposite situations during the second century BCE: here we observe a development of the Roman bureaucracy, on the one hand (notably from the third century), and a rising Chinese private sector, on the other. “By 400, the Roman state employed over 30,000 civilian officials, compared to around four times as many in Western Han China” (Scheidel 2009: 19).

powers – which were involved to varying degrees in local and long-distance trade – contributed to the economic integration of vast regions in Asia: the Parthian Empire (Iran, Mesopotamia, and Transcaucasia); the Kushan Empire (Afghanistan and north-western India); the Shâtavâhana kingdom (central India); the Bengali state (north-eastern India); and the Chera, Pandya, and Chola states (South India).

The birth of an Afro-Eurasian system explains the movements of Mediterranean merchants toward southern Asia, the presence of Indians in the Red Sea, and the Austronesians' journeys toward China and the western Indian Ocean. It also sheds light on the "indianization" of Southeast Asia and the formation of a pre-Swahili culture in East Africa.³³ New structures were set up, with the development of regular journeys, and the existence of organized networks and shared rules, enforced by the various partners. While the desirability of products from the Roman Empire could not compete with that of Asian merchandise, the Roman demand did stimulate and transform the societies of the Ancient World; the connections put in place also allowed for exchanges of knowledge. The area between India and China, however, remained the richest and most active part of the world-system. This world-system would evolve without major breaks until the modern period, which does not mean that there were no changes, disruptions or mutations.

The Pulsations of the World-System

From its beginnings, the Afro-Eurasian world-system developed at a progressive rate, following economic cycles that largely corresponded to cycles of political and religious events (see Figure Ep.2).³⁴ Until the seventeenth century, four cycles can be seen (with phases of expansion followed by phases of contraction); these can be shown as four ascending waves, on an upward curve. They mark a growing integration of the different parts of the system, with rise in population, production, volume and rapidity of trade, and urban expansion (especially of the system's most important cities), and the development of states or city-state cultures that grew ever larger and increasingly complex.³⁵ These phenomena were engendered or accompanied by an expansion of markets (which allowed for a division of labor and gains in productivity), technological improvements, changes in the organization of production, a greater availability of

³³ According to various authors, the relatively low number of Indian artifacts (and even fewer Chinese) found in Southeast Asia at this time prevents us from considering the formation of a world-system. However, the cultural evolution and synchronisms we do observe show the contrary. Moreover, commercial and cultural exchanges were, in all likelihood, more intense than discoveries indicate. Slaves and goods of crucial importance such as textiles, aromatics, and spices leave no physical marks in archaeological layers. Alongside archaeology, textual and linguistic data must also be taken into account. In addition, low-intensity contacts may have had major systemic effects (see above).

³⁴ On this point, see however C. Edens's remark below. The states' actions, and competition between these states, were largely shaped by the structures of the system. Otto von Bismarck recognized the need to apprehend the world as a whole: "The statesman's task is to hear God's footsteps marching through history, and to try to catch on to His coattails as He marches past" (quoted by Diamond 1999: 420). While I. Wallerstein argues that economic cycles characterized the world-system after 1500, he acknowledges that, prior to the sixteenth century, "world-empires" and areas connected to them "may have been [subjected to] some common economic rhythms" (1993: 294).

³⁵ Cf. McEvedy and Jones 1978; Bosworth 1995; Chase-Dunn and Manning 2002.

factors of production (land and labor), a growing investment in capital, and progress in knowledge (see Mokyr 1990: 4–7; Wong 1997: 58). These must be viewed as developing within the framework of socio-ecological systems, both local and global (Hornborg and Crumley 2007). The first cycle ran from the first to the sixth century (it was marked by a rise and fall, within the cores, of the Han, Kushan, Shātavāhana, Gupta, Parthian, Sassanid, and Roman empires); the second, from the sixth to the tenth century CE (within the cores, the empires of the Tang, the Pallavas, the Rāshtrakūtas, and the Muslim and Byzantine empires); the third from the tenth to the fourteenth century (the Song and ensuing Yuan empires, the Chola Empire, Delhi sultanate, the Seljukid and Ilkhānid empires, and the Egyptian state); and the fourth, from the fifteenth to the seventeenth century (the Ming Empire, the sultanates of Gujarat, Bengal, and Deccan, the empire of Vijayanāgara, the Egyptian, Ottoman, Safavid, and Mughal empires).

The temporal limits thus contemplated reveal key periods, or “nodes” in time during which a set of forces crystallized, providing impulses for the ensuing eras. Braudel has spoken of historical condensation, *conjonctures créatrices de vie nouvelle* (Braudel 1979, 11: 193). Various factors can come together in the formation of these particular moments, which correspond to periods of accumulation and investment of capital in infrastructure, production, and commerce. Just as each instrument in an orchestra plays its own score, notes Braudel (1958: 730), “with regard to techniques, the sciences, political institutions, mind tools, and civilizations, interacting with ecological and demographic data, each has its own pace”; it is the blending of their separate rhythms that creates the pulsation, the music of the world-system.

Centers of gravity and peripheral areas thus experienced phases of integration and disintegration: a power took the upper hand, then its decline fostered the emergence of regional rival powers (especially during periods of crisis). The history of India, particularly for the North, and that of China, illustrate these alternating phases of centralization and decentralization (with one difference, for India: it was rarely dominated by a single power, for reasons linked mostly to the geography of the subcontinent:³⁶ “the cost of maintaining a state apparatus on a large scale could not be met by the revenue generated. This required an ‘expanding frontier’ in the shape of cash revenue earned from flourishing long-distance trade and/or plunder” [Thakur 1996: 403]).

From the beginnings of the Eurasian and African world-system, China’s role was crucial.³⁷ Under the Tang and the Song (and perhaps already under the Han), the Chinese space experienced a growth per capita during periods of “efflorescence”

³⁶ See Palat 2015: 218.

³⁷ On China’s preeminence in the world-system, see McNeill 1982: ch. 2, 1998a: 219; Frank 1998. In the system’s dynamics, some researchers have also emphasized the key role played by Central Asia and its nomadic pastoralists, who carried goods and transmitted techniques and ideas (Chase-Dunn *et al.* 2006: 124). While Central Asia at times seemed merely to accompany a tune whose rhythm was set by other players, its role was crucial during other periods, for example between the first and eighth, and during the thirteenth and fifteenth centuries (the Mongol threat was one of the factors that pushed the Ming power to reverse its policy from 1433 onward). It can also be argued that exposure to conquest by Inner Asians stimulated military innovation in China. On the importance of Inner Asians in history, see Lieberman 2009, chs. 5 and 6. He shows that Inner Asian interventions could be destructive, but they could also boost long-distance trade, both directly and indirectly; and Inner Asians were also vital in processes of statebuilding.

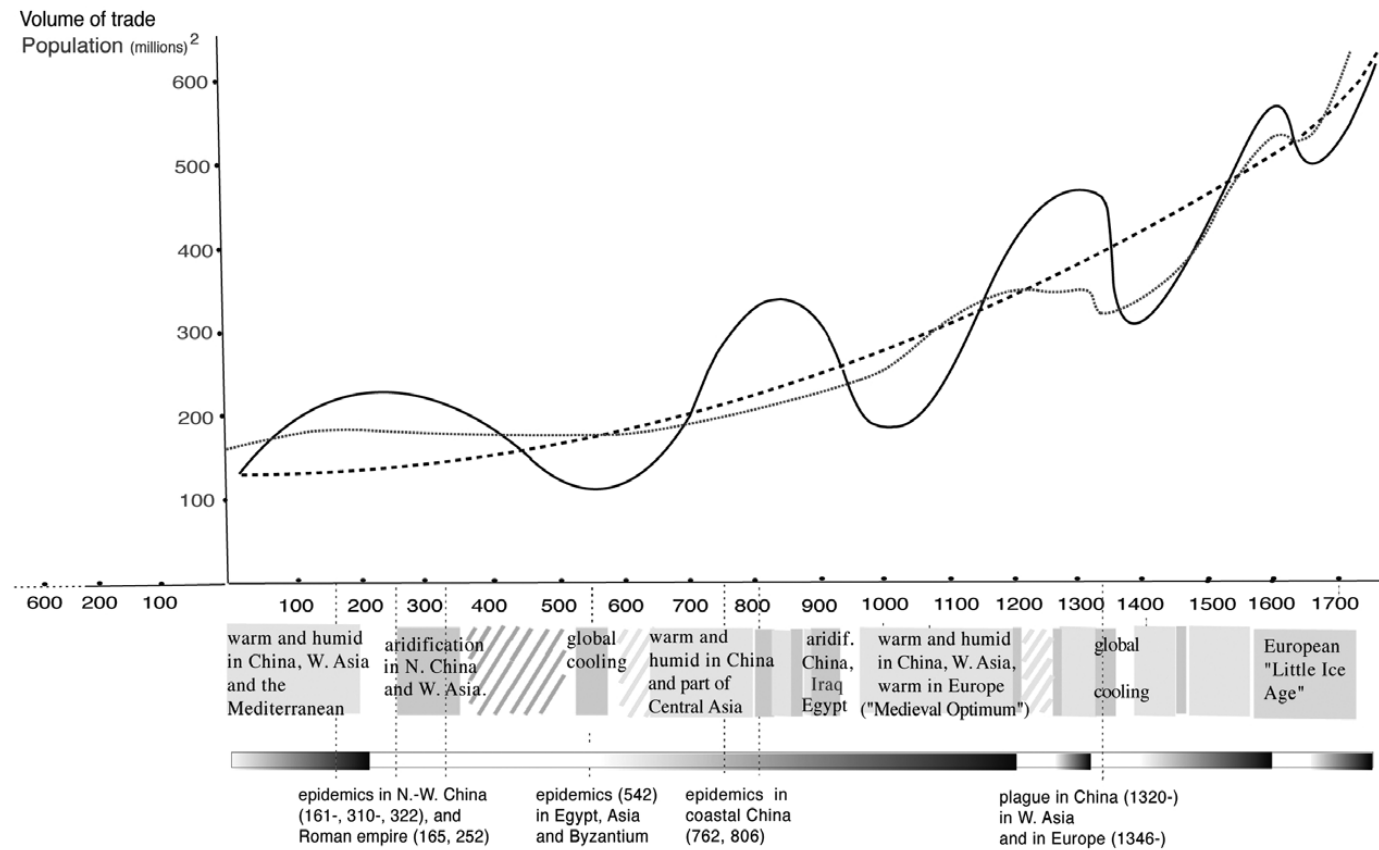


Figure Ep.2 Economic flows in the Afro-Eurasian world-system (first to eighteenth century): correlations with climatic data, demographic growth, technological progress, and the emergence and fall of the main empires¹

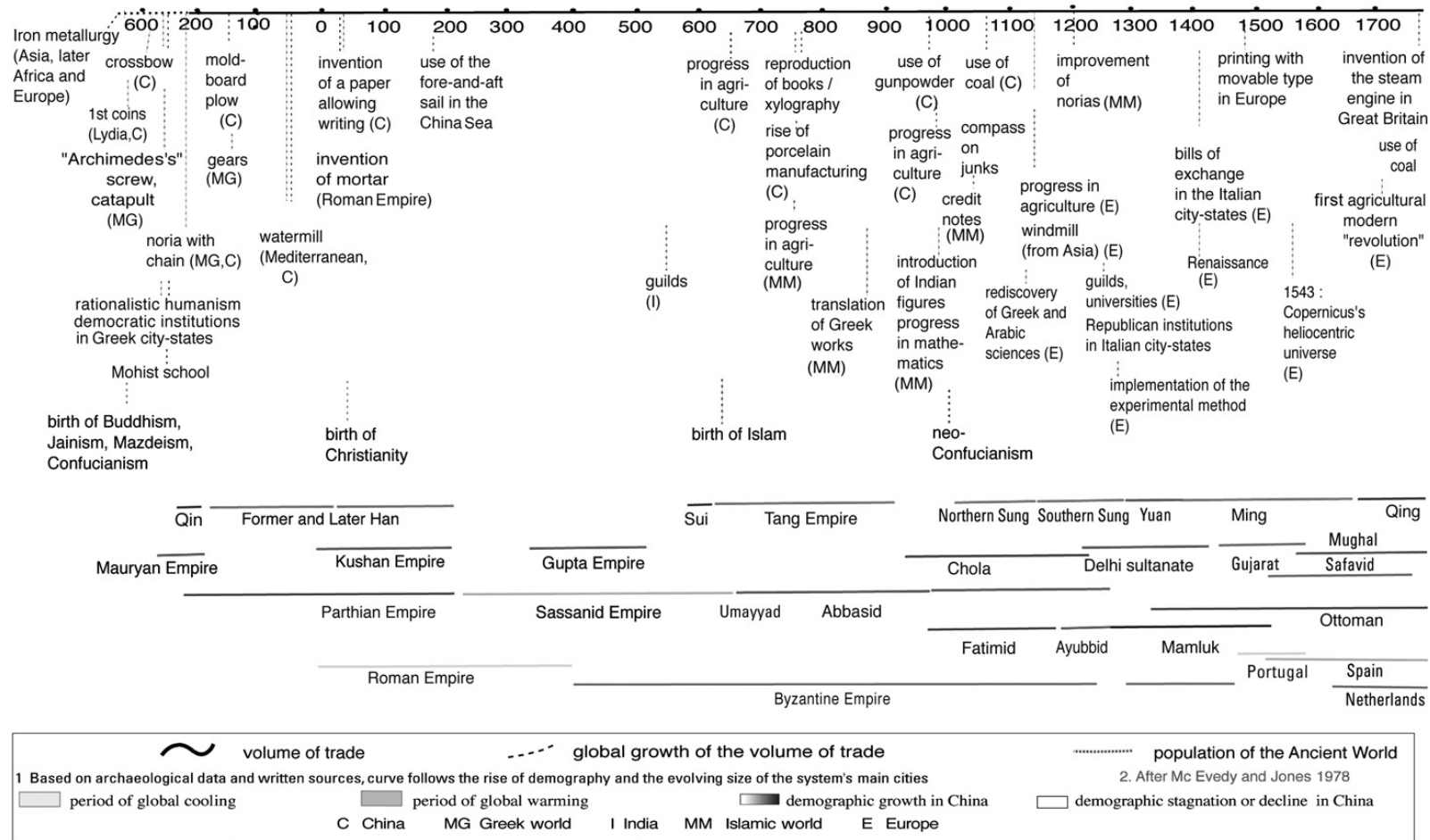


Figure Ep.2 (cont.)

which saw a combination of trade growth, institutional and technological innovation, developing markets, and a transregional division of labor (Goldstone 2002: 333).³⁸ Every period of growth in the world-system followed China's phases of unification and its economic upswings, with the Chinese momentum spreading like a wave from east to west, reaching the West with some delay. Already detectable with the Han dynasty (first century CE), China's influence grew with the ascension of the Tang (seventh century); it increased under the Song (end of the tenth century), and continued with the Ming (beginning of the fifteenth century). Chinese innovations reaching Europe during the twelfth century via the Muslim world included the axial rudder on ships; paper; a quilling machine; and knowledge about the compass. They also flowed in during the thirteenth and fourteenth centuries, often through the Mongol states: the idea of printing; the spinning wheel; iron casting; knowledge about gunpowder. More generally, the flourishing cores stimulated production and exchanges in other regions, favoring processes of coevolution, to which we shall return. Conversely, each Chinese recession initiated a downward trend in the system and/or its restructuring. The Ming decision to withdraw from the system in 1433, along with the development of capitalism in Europe during the fifteenth century, laid the groundwork for the future westward shift of the core of the Eurasian world-system.

Progress in agriculture went hand in hand with the ascendant phases in each cycle. This in turn led to new increases in population and the growth of cities, as well as heightened activity in crafts.³⁹ Agricultural progress was sometimes induced by demographic pressure,⁴⁰ but in addition, increases in agricultural output were often linked to favorable climatic changes, for example during the seventh and eighth centuries, and

³⁸ These "efflorescences," notes Goldstone, "typically involve both Smithian and Schumpeterian growth, in a mutually reinforcing fashion" (2002: 333).

³⁹ On the links between demographic growth and economic upswings, see Frank 1998 and Braudel 1979, 1: 17. In his *Prolegomena*, Ibn Khaldun (1332–1406) has already outlined an economic and political theory showing how population density can be correlated with a division of labor, leading to economic growth. This economic growth, in turn, contributes to a population increase, thus forming a virtuous circle. There is also usually a correlation between population density and political power, with one exception: some semi-peripheries were able to use "geopolitical advantages as well as superior organizational and military techniques" (Chase-Dunn and Manning 2002: 380). Beyond a certain threshold, however, demographic growth does not necessarily play a positive part in industrial development. Low labor costs, for example, seem to have hampered technological innovations in India and in Ming China.

⁴⁰ Intensification in agriculture, however, is not merely a "response to population [or environmental] pressure" (Jones 1996a: 70); it also corresponds to economic and political incentives. Social institutions such as property rights and the functioning of markets have a central role. On the relationships between demographic pressure and technological changes in agriculture (changes in land use, and in tooling), see E. Boserup (1998). Boserup has shown that the transition from short fallow agriculture to annual cropping and later, multi-cropping (without fallow) with the introduction of pulses resulted, not from "inventions," but from population growth. New techniques were implemented, allowing for increased agricultural production; these techniques utilized more and more energy, and usually went along with a yield decrease per hour worked. Intensification therefore occurs only when a certain population level is reached. In addition, demographic growth influences production relationships. "When population becomes so dense that the land can be controlled, it becomes unnecessary to keep the lower class in personal bondage; it is sufficient to deprive the working classes of the right to be independent cultivators" (Jones 1996a: 73). J. Diamond has emphasized the links between population densities, social complexity, and intensification of agricultural practices. "Intensified food production and social complexity stimulate each other, by autocatalysis" (1997: 285). Beyond the role played by demographic pressure, political powers can force

from the end of the tenth century to the beginning of the fourteenth century, in China, western Asia, and part of Europe. During ancient times, the main states were often primarily agrarian. “There are [also] some suggestions, at least at northern latitudes, that a warmer, more stable climate was associated with a reduction in pathogenic virulence” (Lieberman 2009: 83 n. 105).

Moreover, long-distance commercial and cultural exchanges played a key systemic role,⁴¹ by encouraging an increasing division of labor (within and between interconnected societies); the processes of statebuilding; and technological and institutional innovation.

Each period of growth was accompanied by technological innovation in production, transportation, and trade, allowing populations to overcome ecological constraints and human limitations by increasing productivity and transforming production or political relations.⁴² Among the breakthroughs that appeared during periods of growth, as mentioned, there were iron plows using various kinds of moldboards, which had been perfected under the Western Han dynasty; paper, invented during the same era (second century BCE); cement used by the Romans during the first century BCE; and porcelain, exported during the Tang period.⁴³ During the eleventh century, the Chinese built larger junks, and the list goes on. “Innovation” here signifies the greater use of inventions, some already known from earlier times. Xylography, for example, was invented in eighth- or ninth-century China, but developed under the Song dynasty. The compass appeared on Chinese ships during the eleventh century, though the properties of lodestone had been known since the fourth century BCE. In agriculture, transfers of plants accompanied growing exchanges. During the seventh and eighth centuries, the Arabs transported approximately fifteen plant species originating from the Indian Ocean as far as Spain. During the tenth century, the Song introduced new varieties of rice from Champa, which made two harvests per year possible . . . however, whereas innovations in manufacturing and sciences mainly occurred within the context of economic progress, advances in “techniques of power” and in agriculture were also implemented during periods of recession (these were aimed precisely at fighting such recessions). An unfavorable climatic period could in

farmers to increase their working time and transform land use, but this occurs more frequently during global economic upturns.

⁴¹ S. Subrahmanyam (1993: 19) has rightly qualified this opposition between agrarian states and trade-oriented states in Asia for the fifteenth century and the ensuing period. It is true, however, that the contrast is obvious with the European city-states and states of northern Europe such as England as early as the thirteenth century, where revenues drawn from trade appear to have been crucial.

⁴² Contrary to Frank’s opinion (1993a: 421), growth processes are an overall stimulus for innovations; these innovations are only implemented when it becomes profitable to invest in technological development (Diamond points out that necessity was rarely the mother of invention: “technology develops cumulatively, rather than in isolated heroic acts, and it finds most of its uses after it has been invented, rather than being invented to meet a foreseen need” [1997: 245–246]). While it is true that a certain demographic density is often necessary for the implementation of innovations (for example, to enable the introduction of effective means of transport), Chase-Dunn’s and Hall’s point of view (2000: 98) could perhaps be nuanced: these authors consider the demographic pressure as being the usual force behind technical progress, and the cause of political expansions.

⁴³ While porcelain appeared during the Later Han period, it became an export product only under the Tang. Adshead (2004: 80) considers porcelain as “the first item of global culture.”

some cases trigger agricultural innovations leading to processes of intensification (but unlike what many scholars have believed, the development of agriculture and plant domestication may have occurred after the cold period of the Younger Dryas – *c.* 11000–9800 BCE – in western and eastern Asia; see Willcox 2005, Balter 2010, Colledge and Conolly 2010).

Innovation led to increased production, exchanges, and social complexity; they promoted the development of hierarchical structures, which in turn modified the nature of constraints.⁴⁴ Each period of economic growth induced an increased division of labor, social differentiation, and an extension of inequalities, leading to later reactions, which grew particularly violent whenever economic activity stagnated or fell into decline.⁴⁵ During phases of expansion, innovations were often interconnected, from one sector to another. Production, especially production involving relatively complex technologies, has tended to show a ripple effect on other sectors of the economy. A. Pacey (1990: 8) aptly writes of a “technological dialogue” within societies and between regions of the system, a dialogue enhanced by exchanges – whether peaceful or violent, through military confrontations. Among compelled introductions of innovations, Pacey gives the example of an army of Roman soldiers who were taken prisoner by the Sasanids and forced to work on a dam. Throughout history, the great states have perpetrated the systematic deportation of craftsmen.

Technological innovation, resulting partly from a concentration of knowledge, gave the cores a monopoly over the export of desirable products,⁴⁶ the intrinsic qualities of which – along with the ideological power of the dominant centers – could give them the appearance of essential requirements⁴⁷ (good examples of this are silk and porcelain). Goods were often manufactured specifically for export, with the cores adapting their products to suit the markets. The capacity for innovation resulted in part from the concentration of knowledge in the cores, and it depended on social structures, especially forms of ownership and the ways in which labor was organized. It also depended upon

⁴⁴ The Urukian phase in Mesopotamia (fourth millennium) represented a notable first example of these interactions. Moreover, Chase-Dunn and Hall (1997) note that technological change did not have the same effects, depending on the society which was affected by this change.

⁴⁵ It was easier for the state to combat social imbalances in periods of growth than in periods of recession. The tensions in the Chinese countryside within the context of economic expansion during the Song period thus led to Wang Anshi’s reformist movement (1068–1085).

⁴⁶ This process is also clearly visible in semi-peripheries. “In Europe during the 12th and 13th centuries,” observes Pacey (1990: 204), “the transfer of technology from Islamic countries and China was particularly stimulating because Europeans already had a comparable culture of mechanical innovation which was itself evolving rapidly.”

⁴⁷ F. Braudel and I. Wallerstein have rightly pointed out the importance of (quasi) monopolistic situations. For Wallerstein, “core-like production processes” were “relatively monopolized . . . The processes that were relatively monopolized were far more profitable than those that were free market. This made the countries in which more core-like processes located wealthier. And given the unequal power of monopolized products vis-à-vis products with many producers in the market, the ultimate result of exchange between core and peripheral products was a flow of surplus-value . . . to those states that had a large number of core-like processes” (2004: 18). “The slow dissolution of the quasi-monopolies is what accounts for the cyclical rhythms of the world-economy” (2004: 30). While Wallerstein refers to the modern capitalist world-system, the same mechanisms are observable during earlier periods. Chase-Dunn and Hall (1997: 192) describe the advantage China derived from its main export products, silk and porcelain, as “technological rent.”

the ability of a region to gain access to external markets and to accumulate capital, in other words on its position within the world-system. Innovations were crucial to state-building, and the state could promote their development. Here we should keep in mind the close relationship between technology and military institutions, most readily apparent in the successive Chinese empires, the Ottoman sultanate (fifteenth–eighteenth century) and the European continent from the fifteenth century onward.

Institutional and ideological innovations, often in synergy with technological breakthroughs, were also key to the evolution of the system. Building processes in the Persian Empire and the Chinese state of Qin during the sixth and fourth centuries BCE reflect a novel organization of the state. The achievements of the Tang and the even greater achievements of the Song appear remarkable, with their setting-up of efficient administrations (involved in agriculture, water channels and the transportation of goods); the development of free labor; the extension of markets; and the marketing of essential goods, organized on a national basis (Norel 2007: 394). In addition, the Tang and Song eras ensured a broad dissemination of knowledge, facilitated by the use of xylography and the creation of public schools. The role of this Chinese bureaucracy was unprecedented in Eurasia. Developing a practical rationalism based on experience, while encouraging private enterprise, the Song period demonstrates that “growth is [partly] a state of mind.”⁴⁸ Moreover, self-governing groups or places,⁴⁹ encouraging innovation, such as the Indian trade guilds and the city-states of East Africa and Southeast Asia, flourished during periods of economic expansion (Hansen 2000a: 18; 2000b: 607). This process was even more obvious in Europe, which thrived from the eleventh century onward.⁵⁰

New philosophical doctrines or religions – “tools of ideological power” in the words of M. Mann (1986) – often spread during initial phases of growth within a large region or within the entire world-system: Christianity was born during the first century CE; Islam at the beginning of the seventh century; neo-Confucianism appeared in the eleventh century as part of the intellectual movement of the Song period. The role

⁴⁸ J.-M. Daniel (*Le Monde*, April 15, 2003), with reference to S. Kuznets. Pacey (1990: 7) rightly notes that various innovations during the Song period emanated from the bureaucracy of the empire, whereas during the Yuan period, the bureaucracy appears to have been more of an impediment to innovation. Braudel totally misses the importance of the Song era; for the entire Asian area, he writes: “In the thousand years or so before the fifteenth century, Far Eastern history is simply a monotonous repetition of the same events” (1984, III: 485).

⁴⁹ Self-government is one of the characteristics of a city-state (Hansen 2000c: 607). Only some city-states developed democratic institutions, but “even in those ruled by a monarch, the percentage of the population involved in government is much higher than in other types of state” (Hansen 2000a: 18).

⁵⁰ The discovery of the Greek and Arab thought and sciences by Christian Europe during the eleventh and twelfth centuries was the prelude to the development of guilds and autonomous, self-governed universities, and to the initiation of the experimental method by Roger Bacon and other scholars (thirteenth century). Republican institutions in Italian city-states offered individuals freedom of thought and freedom of entrepreneurship, within certain limits; these freedoms would flourish in the fifteenth century during the Renaissance. Hansen (2002) points out that cultures of city-states, however, were also born during phases of disaggregation of macro-states. Note that “the four main historical forms of rationalization of state power [from the fifteenth century onward] analyzed by Foucault (2004), which were based on the successive integration of new techniques of government . . . , were all sought, thought and experienced during accelerating phases of globalization” (Berger 2009: 423 n. 2).

played by the major religions in the processes of integration has often been emphasized.⁵¹ religions and philosophical doctrines have been the bases for many large political organizations, which in turn have contributed to their expansion (see below). Religions have also promoted an extension in trade networks. In addition, L. Berger rightly notes that

the coexistence of various religious traditions within a territory, within a context of mutual tolerance and pluralism of ideas, encouraged the appearance of various episodes of “efflorescence” and intensive growth associated with the various phases of globalization. This kind of ecumenism fostered an exceptional cultural creativity and paved the way for more secular worldviews, from which outstanding scientific and technological progress arose. (Berger 2009: 436)

Institutional and ideological innovations also occurred during phases of recession, when the elites tried to adapt themselves to new conditions created by a chaotic political and social context or ecological crisis. This is apparent in the revival of neo-Confucianism in China during the ninth century as part of a “culturalist” movement: the crisis of legitimacy affecting the ruling elite led it to seek new sources which could justify its power. The reforms of Jia Sidao (1263–1275) were implemented during a period of recession of the Song Empire . . .

Taking advantage of growing exchanges, and in synergy with technological and institutional changes, the extension of markets led to the phenomenon of “efflorescence” (Goldstone 2009), of which Pomeranz (2009a) correctly emphasizes the diversity (see also Norel 2009b).⁵² Statebuilding can encourage this extension of markets for goods and markets for factors of production. Tang China thus “created markets for factors of production and an embryonic system of markets. Technological innovation can then be further developed and become profitable, thanks to these markets for factors of production” (Norel 2005: 438ff.). The achievements of the Song Empire appear to have been even more remarkable. In general, ancient world-systems experienced a spectacular external trade expansion, led by a particular power, which then benefited from its increasing influence over the whole area to which it sent its products, men, and capital. This same power could take advantage of its distant influence to improve its own economy: rising trade revenues would stimulate, to a greater or lesser extent, the creation of markets for factors of production within the country, thus breaking with the traditional logic of embeddedness of the economy (Norel 2009).

This creation of markets for factors of production was only effective, however, if the state took positive action along these lines and if a degree of symbiosis was put into place between the ruling political class and the private sector (North 1981) (see below).

⁵¹ See H. P. Ray (2003), on Buddhism and Hinduism, and K. N. Chaudhuri (1985) on Islam. Religions – ideology, more generally – played a crucial role in the control of cores by their elites, as well as in the expansion of these cores and the structuring of their domination over peripheries. An example is the “spontaneous” conversion to Christianity by the king of Kongo and the aristocracy of this kingdom in 1491 (Ekholm 1972). The prince of Great Jolof (Senegal) also converted to Christianity in 1488, and received Portuguese support.

⁵² Remember that efflorescences are prolonged episodes of increased per capita gross domestic product, based on Smithian and Schumpeterian growth; J. Goldstone (2002) has emphasized their recurrence throughout history (on this concept of efflorescence, see Pomeranz 2009a).

Growing trade led to competition among states. Although such competition could stimulate commerce and encourage innovation, it could also lead to wars of expansion.⁵³ Each ascendant phase was accompanied by the rise of empires⁵⁴ whose investments in public works (for example, the building of roads and canals by the Han, Tang, and Song in China during the first, sixth, and tenth centuries; the Muslim Empire of the seventh century; and so forth) often contributed to economic growth, at least during the early stages.⁵⁵ Moreover, the processes of statebuilding also spurred progress in knowledge: we observe this clearly in the successive Chinese empires; in the Umayyad and Abbasid empires, from the seventh to the ninth century; and in Europe starting in the thirteenth century with the appearance of universities and colleges. India offers a good example of competition among states, which periodically tried to control both the oriental and occidental maritime shorelines of the peninsula. India has most often been structured as a multicentered core, however, as seen on the maps above. Control of regions at the intersection of various maritime and terrestrial spaces, such as Egypt and the Levant, has represented a major issue for the great powers, especially during periods of growth in the system (see below). There are rhythms specific to some regions, deriving from internal factors as well as from competition among centers of accumulation. To take an example: after a period of centralization during the eleventh–twelfth century, which was linked to developments in agriculture and trade, the Chola kingdom disintegrated during the thirteenth century, within a phase of (slower) growth – but also of restructuring – of the world-system.

Between periods of prosperity (for the elites, at least), growth, and integration, there came periods of recession and disorder in the system. These were marked by declines in production and exchange; de-urbanization; fewer infrastructures; increasing conflicts; a disintegration of states; and a fragmentation of currents of thought (Frank and Gills 1993b: 304). Cycles are probably inherent in the structure of the system itself (see Figure

⁵³ The (internal and external) development of the state may in fact result from various factors, such as population growth, rising production, expanding trade, increased social complexity, and innovations. Competition among states probably partly explains technical progress and growth during the Warring States period in China, which led to the emergence of the Qin Empire (see above). Remember that the current of thought of the legists formed in China during this period of the Warring States; the legists advocated a strong state politically, economically, and militarily. The role played by military competition among states will be elaborated on below. Competition often “forces states to deepen institutional capacity” (Morris 2009: 101). J. Diamond (1997: 288–289) also notes that “competition between societies at one level of complexity tends to lead to societies on the next level of complexity, if conditions permit.”

⁵⁴ Imperialistic expansion can also be an alternative to a domestic redistribution of wealth, and an outlet for social tensions. For various reasons, empires also emerged during phases of recession in the world-system (see below).

⁵⁵ However, let us recall here the reservations made by C. Edens (1993: 408): “Regional political integration or empire does not guarantee greater capital accumulation.” Moreover, Edens underlines the fact that during some periods, we seem to observe “inverse correlations of trade and regional political integration”; this was the case in Mesopotamia during the Early Dynastic III, in the middle of the third millennium BCE (prior to the emergence of the Akkadian Empire), and during the Isin-Larsa period, at the beginning of the second millennium BCE (following the Ur III’s collapse) (see Volume 1). J. Friedman (1993: 409) goes further by claiming that centralized empires have often been a symptom of economic slowdown. He objects to Frank’s idea according to which the fall of empires is an indication of a B phase of the system (phase of degrowth). Here, however, overall data appear to prove Frank right. V. Lieberman (2003) also notes that political and cultural integration is based on correlations between agricultural, demographic, and industrial growth, expanding trade, and military pressures.

Ep.3).⁵⁶ There were multiple causes for this reversal of trends; a set of interconnected variables should be taken into account,⁵⁷ such as internal contradictions within states and societies; state policies discouraging production and trade (overextension of the state apparatus, state-sponsored wars interrupting investments in the productive sector,⁵⁸ excessive taxation, and so on); and political struggles for control over wealth and state power. More generally, increasing economic and sociopolitical complexity comes with higher costs,⁵⁹ and every society finally reaches a point of declining marginal returns (unless new organizational or technical solutions are found, but these merely push back the deadlines) (Tainter 1988: 194).⁶⁰ Complexity then becomes less attractive, and a process of disintegration is initiated;⁶¹ in the end, a decrease in return on investments and a loss of competitiveness lead to decentralization and disaggregation.⁶² The populations of the Roman Empire, burdened by taxes, thus at times joined the “Barbarian” invaders. Elvin (1973) has clearly demonstrated the major social

⁵⁶ This model presents an outline of the combinations of influential factors. There are other possible interactions, such as those linking the environment and technical innovation (in England, during the eighteenth century, deforestation led to a wood shortage and an increase in its price, which led to the use of coal in blast furnaces). Note that the system’s trajectory changed from the bifurcation that occurred during the Industrial Revolution, and maybe as early as the sixteenth century, when the capitalist ideology of the Italian city-states permeated the European country-states. G. Arrighi (1994) and G. Arrighi and B. J. Silver (2001, 2009) delimit systemic cycles of capitalist accumulation from the sixteenth century onward, with the city-state of Genoa the prominent capitalist entity of the first cycle from the late fifteenth century to the early seventeenth century (on a smaller scale, it is probably possible to identify a Florentine cycle during the fifteenth century) (Braudel 1979, III: 205, 208).

⁵⁷ The debate between researchers who focus on external factors to explain the collapse of states, and those who put forward internal imbalances is, in fact, a false one. There is always a combination of both external and external disintegrative forces, within the framework of a recession of the world-system(s). We observe the same combination of external and internal forces during phases of growth. “To some degree,” also notes V. Lieberman (2003: 48), “a complex synergy rendered artificial the distinction between internal and external stimuli.”

⁵⁸ I. Wallerstein (1983: 59–60) emphasizes the military cost of maintaining a “hegemonic” position.

⁵⁹ Imperial elites were sometimes aware of this danger. P. F. Bang (2009: 106) thus shows that, for a long time, Rome chose “to build a tributary empire at the lowest possible cost” (the use by Rome of its victory in Macedonia in 168 BCE is a good example of this). Gifts of silk to the nomads of the steppes by the Han, the Tang, and the Song also attest to an acknowledgment by the state that a purchased peace is less costly than military action. According to Bang, “a set of punitive [Han] campaigns during the decade from 107 to 118 CE cost the imperial government five to six times the entire amount spent on barbarian appeasement” (2009: 107). Garnsey and Saller (2001: 40ff.) write of a “government without bureaucracy” for the Roman Empire prior to the third century. Conversely, during the fourth and fifth centuries “provincial administration expanded; this brought the number of administrators closer to that of Han China” (Bang 2009: 109). The choice of a minimal bureaucracy was not without disadvantage: it implied a collaboration of local elites, who benefited from it and strengthened their positions, fostering, over the long-term, a decentralization and a disintegration of the empire (Bang 2009).

⁶⁰ One may criticize Tainter for putting forward this sole argument based on the law of diminishing marginal returns within a context of increasing social complexity.

⁶¹ Tainter points out (1988: 201), however, that within a system of competing powers, competition forces the states to maintain high levels of complexity, even in cases of declining marginal returns on investment, which tends to lead to a simultaneous collapse of these states, a process observed during various periods. As is the case for other factors (for example, demographic growth), competition can also have beneficial effects, until a turnaround occurs when costs outweigh benefits.

⁶² Here, it is not just about industrial activity. In agriculture, in the absence of technological progress, “marginal returns on investment” decline as work input increases (see Boserup 1998).

cost represented by the overextension of the Chinese empires: it required growing administrative and military expenses, and led to excessive taxation, an impoverishment of the peasant class, and ultimately, internal disturbances. Phenomena of capital decentralization in the ancient and modern world-systems may have been central to shifts in centers of accumulation (Ekholm and Friedman 1993: 73 n. 19).⁶³ The financial expansion of a core, as F. Braudel has noted, is its “Autumn flowering,” which encourages and accompanies the emergence of other centers (1979, III: 208, 226–227).⁶⁴ However, there is only limited evidence for this phenomenon prior to the modern period, although J. Friedman highlights this process for Greece during the fourth century BCE (1994: 2; 2000: 142). A decrease in resources (such as wood and metals) was also responsible for higher production costs, higher transport costs, and lower investment. Moreover, the states in the cores tried unsuccessfully to bar the spread of techniques that partially underpinned their supremacy (particularly in the arms sector). The Mongols thus used explosive weapons previously invented in China against the Song. From the eleventh century onward, a good deal of European progress was founded on the adoption and adaptation of Chinese innovations, which arrived via the Muslim world and the Mongol states.⁶⁵ Following Abu-Lughod (1989), Mielants (2007) has rightly pointed out the crucial role played by the Mongol expansion (thirteenth century), which “at the same time ruined the only true mercantilist policy in the history of China” (under the Song) and encouraged the rise of Europe (Norel 2009b: 193).

Moreover, Malthus has shown that populations tend to grow more quickly than agricultural production. Demographic growth accompanying periods of economic progress ends up creating social tensions⁶⁶ and environmental problems, which in turn lead to decreases in production,⁶⁷ increases in the cost of production, and a “fall of average elite

⁶³ Following Sombart, Braudel recognizes phases of “financial expansion” in the evolution of capitalism (during the modern period), during which the “social oligarchy” of the dominant power “withdraws from active trading,” putting its money into finance instead of investing it into productive activities. Cf. also Wallerstein 1984b: 384. The appearance of financial phases is inseparable from the process – which was new during the fifteenth century – of massive loans by competing states from entrepreneurs and trading companies. Arrighi (1994) and Arrighi and Silver (2001) have clearly shown that a period of material expansion of capitalism was accompanied by an overaccumulation of capital; this led to a phase of financial expansion which corresponded to a period of hegemonic transition in the system. Toward the end of this phase of financial expansion, capital investment in new, more profitable fields of production and exchange, and in other locations, initiated a new cycle. At the same time, the older core made payments with its currency, and lent money in the same currency. However, in today’s ongoing hegemonic transition, it is China which lends money to the USA, and not the reverse. For his part, Norel (2009b) distinguishes three phases in financial cycles, with the third phase corresponding to the period termed “financial expansion” by Arrighi.

⁶⁴ “By reaching the stage of financial expansion, every capitalist development of this order seems to have, in some sense, announced its maturity: it was a sign of Autumn” (Braudel 2002: 246).

⁶⁵ The transmission of the silkworm and sericulture techniques to Persia and the Byzantine Empire, however, did not really harm Chinese exports of silk, due to increased demand and to the enhanced diversity of commercially available products. The later imitation of Chinese porcelain by the Muslim world and Southeast Asia did not prevent Ming exports from increasing, because the latter were of higher quality.

⁶⁶ External (between populations of different eco-climatic regions) and internal (between social classes and within the power sphere) social tensions. See Goldstone 1991: 459–460; his analyses of the state crises between 1500 and 1800 also shed light on earlier periods. Goldstone shows that, for the most part, power conflicts broke out within the ruling class, and, more importantly, between this class and an emerging elite. Moreover, these periods of social disorder fostered the appearance of heterodox religious movements. See also Lieberman 2009: 35.

⁶⁷ Or at least in the available surplus; see here Turchin and Nefedov 2009: 9.

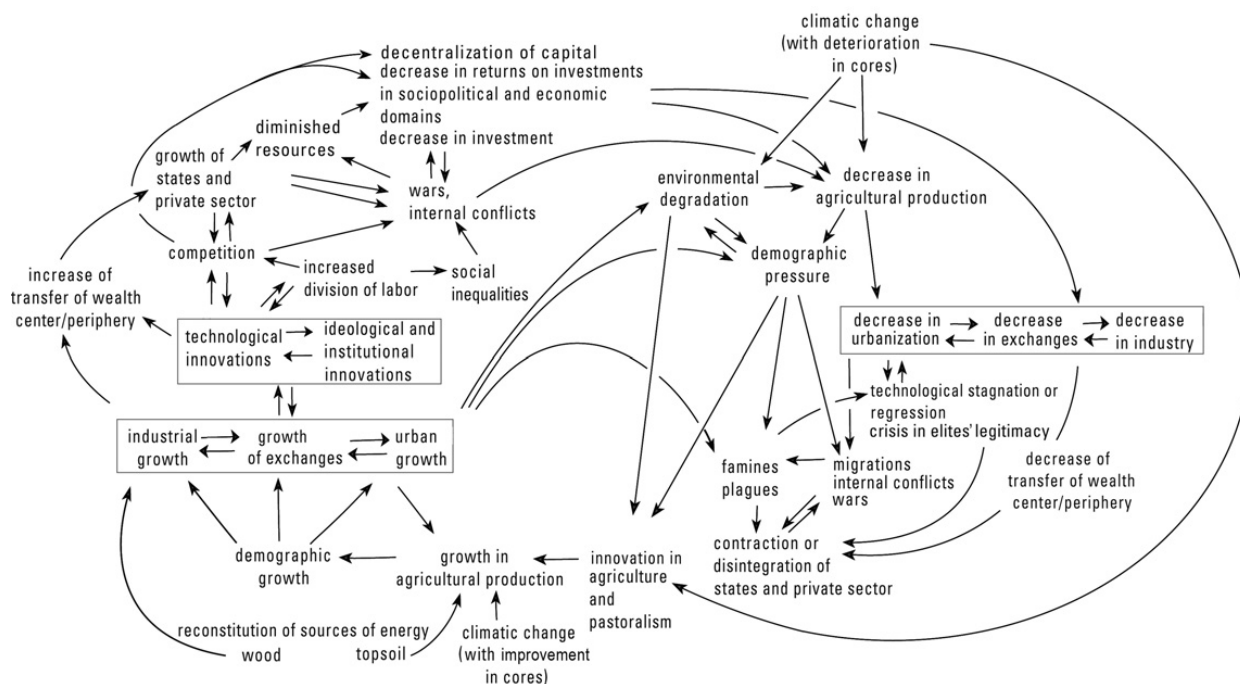


Figure Ep.3 Cyclical logic of world-systems prior to the sixteenth century

incomes" (Turchin and Nefedov 2009: 10).⁶⁸ In addition to ideological causes, environmental perturbations probably explain migrations out of Central Asia during various eras. Examples of these are the movements of populations from the end of the third to the sixth century: the Xiongnu toward China; the Huns toward India, Persia, and Europe.⁶⁹ The bringing of distant peoples into contact with one another – directly or indirectly – hastens the spread of disease (McNeill 1998b). Epidemics appear to have occurred on a larger scale during periods of climatic deterioration, when populations were weakened. It is also possible that more pathogenic virulence occurs during these periods. The development of the cores during each phase of growth also resulted in deforestation and soil erosion, and this ultimately had a negative impact on growth.⁷⁰ Disregard for the environment has usually been the rule in the system's cores,⁷¹ and its exploitation has been part and parcel of relations between any core and its peripheries.

But first of all, environmental disruptions and the cycles themselves may be linked to climatic changes, usually connected to cycles in solar activity.⁷² Recent research shows

⁶⁸ On these points, see also Lieberman 2009.

⁶⁹ These migrations appear to have been partly linked to a global climatic cooling. E. N. Chernykh (1992) has pointed out the cyclical character of phases of destruction and of cultural recomposition, accompanied by migrations, in the Eurasian area, in particular from the steppe zone. The complementarity between nomads and sedentary people was broken during unfavorable periods; in the ancient world-systems: "nomads were often the catalysts of systemic change" (Chase-Dunn *et al.* 2006: 114). See also on this point Lieberman 2009; chs. 5 and 6.

⁷⁰ Chew 2001; Hughes 2009. However, technological innovations in agriculture, triggered by the population density reached, have often led to improvements in soil fertility at a later stage, thus initiating a new growth cycle (Boserup 1998: 21–22).

⁷¹ "We are the absolute masters of what the earth produces," wrote Cicero (ed. Powell 1995: 14–15).

⁷² Bond *et al.* 2001; Hu *et al.* 2003; Jones and Mann 2004; Zhang *et al.* 2008. These researchers show the existence of solar cycles lasting 87, 210, 400/500, 950, 1,500, and 2,300 years during the Holocene (see

the existence of long solar cycles during the Holocene (200, 400/500, 950, and 1,500 years). Climatic deterioration at the level of the cores was highly influential in reversing the cycle into a phase of recession. Braudel (1958: 732) has noted “the fragility of the floor of economic life” in ancient societies. Occasional drops in temperature, however, had effects that varied according to region, such as aridification, or increased rainfall, and societies reacted diversely to transformations in their environments.⁷³ Note, moreover, that global cooling from roughly 1450 to 1475 did not lead to a serious recession, although it did affect Ming China, India, and Egypt, and affected the collapse of the Great Zimbabwe state: the system’s growth and the forces of integration were probably strong enough during this period to enable it to resist. Secular cycles have been discussed in these volumes. During shorter periods, the phenomenon of the El Niño–Southern Oscillation was also a factor worldwide: these phenomena do seem to occur more frequently at certain times.

Phases of decline in the system were marked by a disintegration of empires and an increase in internal conflicts and wars. The weakening of the centers sometimes hastened changes in the system’s hierarchy, with strong states emerging in peripheries or semi-peripheries. For example, in the Asian steppes, the first Turkish Empire emerged in the middle of the sixth century, at a time when no powerful state existed in China. The Khitan unification also occurred early in the tenth century, between the fall of the Tang dynasty and the formation of the Song state.⁷⁴

In times of recession, the world-system did not disappear, but underwent a phase during which its networks were restructured, as were its related states and their societies (at the economic, political, and ideological levels). The next upswing then occurred, brought on by various factors: a more favorable climatic situation; a reconstitution of energy sources (soil, wood); technical innovations in agriculture, and so forth. In sum, a group of forces working together tends to produce a pulsation in the system,⁷⁵ leading to an upward movement in the curve.

At first lengthy (third to sixth century; eighth to tenth century), recessions later grew briefer (around seventy years during the fourteenth century; under sixty years during

Brooke 2014). Many texts deal with climatic cycles and their possible causes (see Anderson 1990, 1992; Rahmstorf 2003; Gupta *et al.* 2005; Debret *et al.* 2006). V. Lieberman has recognized the crucial impact of climate change – connected to other factors – on global evolution (2009: 79–84, 144–146, 162–164, 417–418, 554–558, 687–691).

⁷³ See Yasunari *et al.* Speaking of ancient Chinese societies, Liu and Chen (2012: 151–152) are correct in noting: “The cycles of rise and fall of these social systems often parallel the climatic fluctuations, but climatic changes cannot be used as a simplistic explanation, as in many cases it is the social responses and leadership strategies that defined the ultimate social changes.” See also Lieberman 2009: 81ff.

⁷⁴ Di Cosmo 1999a: 12. The militarization of pastoral societies during periods of crisis allowed the cornering of external surpluses through various strategies, developed in parallel or successively: extortion of tribute (Xiongnu of the second and first centuries BCE); commercial partnerships (Turkish and Khazar empires from the sixth to the tenth century); dual administration (Khitan Empire from the tenth to the twelfth century); and finally direct administration, implying taxation of the populations controlled, a policy initiated by Genghis Khan and later Ögödey (Di Cosmo 1999a: 27ff.). The adoption of a new strategy as the dominant mode of levying surpluses did not imply abandoning ancient strategies: different methods were thus used to corner surpluses. Direct administration was only viable during periods of growth of the world-system.

⁷⁵ P. Turchin and S. A. Nefodov (2009: 4) have also advocated “a synthetic theory of secular cycles.”

the seventeenth century).⁷⁶ This shortening of the phases of recession probably reflects greater integration and ever-increasing forces of acceleration within the world-system.⁷⁷ Moreover, recessions did not affect all parts of the system to the same degree, either due to the partial integration of certain subsystems or, more often, due to particular local or regional conditions. India and Southeast Asia, most notably, appear to have been out of sync with the rest of the world-system, at times.⁷⁸ For example, the Gupta Empire (fourth and fifth century CE) emerged at a time of recession of the world-system. Indeed, the intense contacts between India and Southeast Asia during this time led to the indianization of the latter region. Although the recession in western Asia from the ninth to the tenth century produced a sharp decrease in its urban populations – Baghdad being a notable example – Indian cities experienced modest growth during the same time period, and trade between India and Southeast Asia remained strong. During the fourteenth century, the downward spiral greatly affected the two far ends of the world-system (perturbations in China; outbreaks of the plague in China, Egypt, and western Asia; economic problems in the Ilkhanid Empire and its ensuing demise), while trade between India and Southeast Asia continued with little change, and Mojopahit (Java) enjoyed great prosperity. During the fifteenth century, when China, along with its huge market, all but cut itself off from foreign trade from 1433 onward,⁷⁹ commerce was thereby forcibly disrupted in the China Sea, but in Southeast Asia trade continued to flourish, and Malacca was described by the Portuguese at the start of the sixteenth century as “the biggest warehouse in the world.” The peculiar situation of Southeast Asia might be attributed to climatic conditions: “in some periods, there is evidence of counterphasic climatic trends in parts of South Asia and mainland Southeast Asia, and in Japan and parts of Southeast Asia” (Lieberman 2009: 82 n. 103). The relative stability of part of Southeast Asia is also related to the development of wet rice cultivation – also a significant factor of stability for South India – as it is to the strategic importance of the Straits of Malacca, and to the high demand for spices from the Moluccas. In addition, this asynchrony appears to be

⁷⁶ V. Lieberman also points out “the declining duration and severity of successive periods of fragmentation” (2009: 10–11). “Breakdowns grew shorter and less institutionally and culturally disruptive” (2009: 15).

⁷⁷ This shortening does not appear to be connected with the length of solar minima, although Usoskin *et al.* (2012: 372) show that “Grand minima occur of two different types: shorter than 100 years (Maunder-type) and long ≈150 years (Spörer-type).”

⁷⁸ Gills and Frank (1993b: 149) have underscored these phenomena of desynchronization, which would help to explain some restructurations and developments in the world-system. They argue that the flourishing of some powers within a context of global crisis results from the weakening of the other powers; but why then was a particular state – and not another – able to develop? C. Chase-Dunn and T. D. Hall (1997: 149, 221, 224) note that South Asia and Southeast Asia show dynamics less closely in synchrony with the Afroeurasian world-system than other regions such as China or western Asia. The rise and decline of states in South Asia and Southeast Asia are often in counterpoint to the Chinese empires. D. Wilkinson (1995a) shows that regions of the Eurasian continent were sometimes out of sync during phases of decline of the world-system. Thus Byzantium was – temporarily – expanding at the beginning of the sixth century, as well as at the end of the ninth and part of the tenth century.

⁷⁹ For debated reasons: Mongol threats; the fear of hemorrhage of copper coins in trade; reaction against the excessive costs of Zheng He’s expeditions; environmental problems (deforestation due to an oversized program of shipbuilding); and new control of government by Confucian currents. Although the decline of external Chinese trade after 1433 should be qualified (Hobson 2004), Ming policy worked against the Smithian dynamic which gained momentum under the Song (Norel 2009b).

tied to the pace of China, which often moved ahead of the rest of the system: enjoying links to two systems (India and China), Southeast Asia could more easily compensate for recessions and take quickest advantage when China entered an upward trend. For the same reasons, South India and Sri Lanka likewise appear to have escaped the ups and downs of the system. Moreover, unlike China, northern India or western Asia, these regions were usually not the targets of foreign invasions (Inner Asian incursions were a cause of instability in South Asia [Lieberman 2009: 632]). The Indian peninsula was continuously able to take advantage of the multiplicity of commercial routes to which it was connected. More generally, the multicentered structure of the Indian “core,” linked to geographical and climatic conditions specific to each region, was a factor that contributed to the differences of the rhythms we observe.⁸⁰ Note that while China was periodically unified, by contrast, the successive Indian powers failed to unify the subcontinent.

The rise and fall of cities – whose interconnections form the system’s “basic foundation” – serve as useful indicators of economic activity, levels of interconnectedness between regions, and transformations in the system(s).⁸¹ T. Chandler’s 1987 calculations of the population of the twenty-five largest cities (updated by Modelski [2003] and Morris [2013]),⁸² are useful in this sense, but they need to be approached with at least two caveats. First, his estimates for the oldest periods are questionable, especially for India and China. Second, his method tends to underestimate the important role of city-states, whose economic and cultural influences are usually greater than their demographic standing. Prominent cities belonged mainly to the great powers controlling the cores of the system, as shown on the maps for the four cycles identified for the first and second millennia CE. During the fifteenth and at the beginning of the sixteenth century, we also find major towns such as Malacca and Venice that were actually city-states belonging to semi-peripheries (at this time, however, Venice was more a “macro-state” [Hansen 2000a: 16] than a “city-state”).

The Fringe Cultures of the Indian Ocean: The Example of Madagascar

The Indian Ocean was ringed with societies of various origins, who maintained contact through long-distance exchange networks and who developed ever-changing syncretisms: these are what P. Ottino (1974a, b) has called “fringe cultures,” a concept borrowed from the historian A. H. Johns, who applied it to the northern coast of Java.

Madagascar offers a good example of the building of such cultures. It is within the framework of the Indian Ocean that Madagascar developed as a periphery of the

⁸⁰ See also Lieberman 2009: 632. Turchin and Hall (2003: 55, 59) show that endogenous dynamics can induce specific oscillations in a region or a subsystem.

⁸¹ On the link between urban growth and economic expansion, see Braudel 1979: 421ff. “Towns,” as Braudel writes, “generate expansion and are themselves generated by it” (1981: 479). C. Chase-Dunn *et al.* (2006: 120) have pointed out the correlations between the size of the largest cities and that of empires. On city size and social development, see Morris 2013: 165ff.

⁸² Chandler’s estimates are made every 150–200 years until 1000 CE, and every 50 years afterwards. A. Bosworth (1995) has used Chandler’s work in order to “test” the cycles put forward by Frank and Gills (1993c).

Table Ep.1 *Solar minima and average temperature minima*

Solar minima ⁸³	Estimated periods <i>c.</i>	Reconstructed temperature minima
Homeric minimum	800 BCE ⁸⁴	800 BCE ⁸⁵
	390–360 BCE ⁸⁶	400–350 BCE ⁸⁷
		170–190 CE
	250 CE ⁸⁸	300, 320, 340 CE ⁸⁹
	430 ⁹⁰	
Vandal minimum		540 ⁹¹
	685 ⁹²	636, 660 ⁹³
		800–810 ⁹⁴
		around 850 ⁹⁵
Oort minimum	900 CE ⁹⁶	900–910 ⁹⁷
	1040–1060 ⁹⁸	1060, (1052–1090) ⁹⁹
	1130 ¹⁰⁰	1110 ¹⁰¹
		1280–1290 ¹⁰²
Wolf minimum	1320–1350 ¹⁰³	1320, 1340, 1350 ¹⁰⁴
Spörer minimum	1450–1470	1448–1470 ¹⁰⁵
		1530, 1590 ¹⁰⁶
Maunder minimum	1650–1700 ¹⁰⁷	1680 ¹⁰⁸

⁸³ Usoskin *et al.* 2012: 372.⁸⁴ Martin-Puertas *et al.* 2012; Brooke 2014: 301. Usoskin (2013) gives 765 BCE.⁸⁵ Bond *et al.* 1997; Usoskin *et al.* 2007: 3.⁸⁶ Usoskin 2013. J. L. Brooke notes a moderate solar insolation minimum at 400 BCE (2014: 301). Later, he writes “325 BCE” (2014: 324).⁸⁷ Intense winter monsoons have been noted in China from 475 BCE onward (Brooke 2014: 309).⁸⁸ Usoskin *et al.* 2007: 3.⁸⁹ Moberg *et al.* 2005; Christiansen and Ljungqvist 2012. J. Esper *et al.* (2014) indicate that northern European summer temperatures were low around 220, 540, and 660 CE, and very low around 340 CE.⁹⁰ Usoskin *et al.* 2007: 3. The episodes around 250 and 430 are less severe than the phase around 680.⁹¹ Burroughs 2001; Moberg *et al.* 2005; Mann *et al.* 2008. J. L. Brooke (2014: 348) points out “a spike of cold temperatures around AD 540,” after “a massive volcanic eruption in 536.” See also Jones and Mann 2004; Esper *et al.* 2014.⁹² Usoskin 2013; Brooke 2014: 352 (onset of the Vandal Minimum: between 500 and 600 CE).⁹³ Moberg *et al.* 2005; Christiansen and Ljungqvist 2012; Brooke 2014: 325; Esper *et al.* 2014.⁹⁴ Mann and Jones 2003; Moberg *et al.* 2005; Christiansen and Ljungqvist 2012.⁹⁵ Esper *et al.* 2002; Grove 2002; Moberg *et al.* 2005.⁹⁶ Brooke (2014: 356) sees “a solar minimum and coincident volcanic eruptions around AD 900.”⁹⁷ Mann and Jones 2003; Moberg *et al.* 2005. ⁹⁸ Cook *et al.* 2004; Usoskin 2013.⁹⁹ Esper *et al.* 2002; Cook *et al.* 2004; Berner *et al.* 2011. Low Nile floods between 1052–1090, see Jiang *et al.* (2002).¹⁰⁰ Low Summer temperatures in northern Europe, Esper *et al.* 2014.¹⁰¹ Mann and Jones 2003; Mann *et al.* 2008. ¹⁰² Mann and Jones 2003; Moberg *et al.* 2005.¹⁰³ Crowley 2000: 270–277; Esper *et al.* 2002. I. G. Usoskin gives 1305, which appears too early.¹⁰⁴ Brown 2001: 256; Mann and Jones 2003; Mann *et al.* 2008; Esper *et al.* 2014.¹⁰⁵ Moberg *et al.* 2005; Mann *et al.* 2008. See Zhang *et al.* 2007 for China. Explosion of Kuwae Island (Vanuatu) in 1452. Large number of low Nile floods between 1459 and 1474.¹⁰⁶ Moberg *et al.* 2005; Mann *et al.* 2008. ¹⁰⁷ Usoskin *et al.* 2012; Usoskin 2013.¹⁰⁸ Moberg *et al.* 2005; Mann *et al.* 2008.

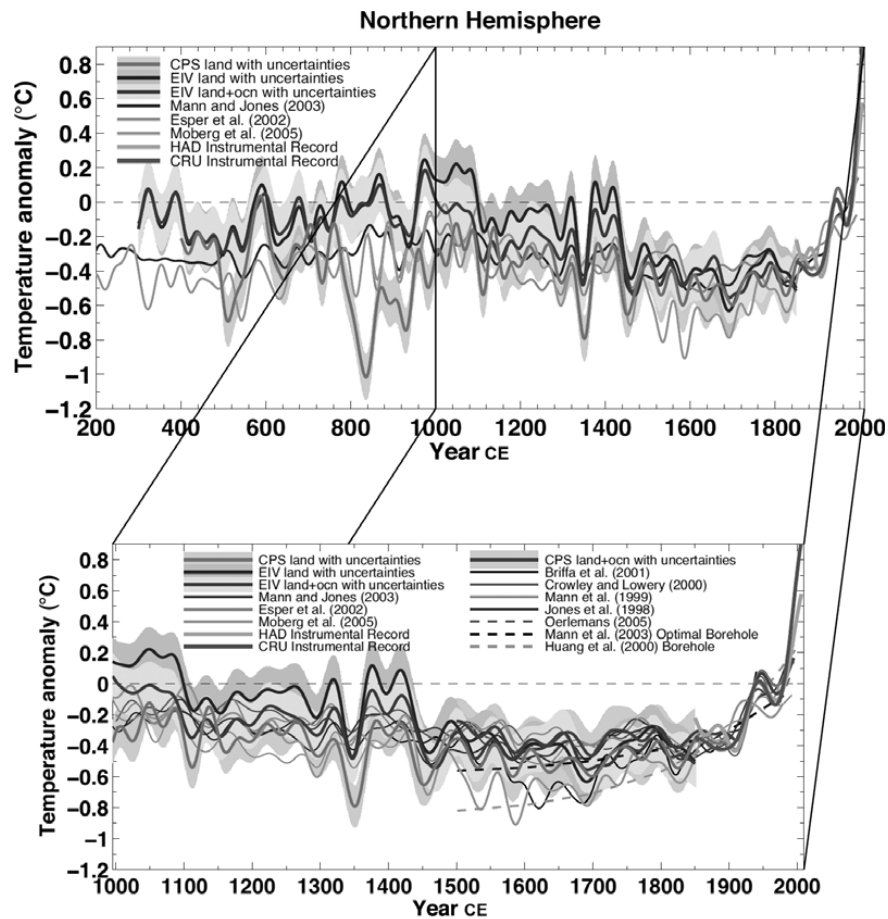


Figure Ep.4 Variations in average temperature over two millennia
(Mann *et al.* 2008, fig. 3: 13256)

world-system from the eighth century onward (although an earlier peopling of the island is now attested), at the crossroad of influences coming from Southeast Asia, East Africa, Arabia, Iran, and India.

The first major Austronesian peopling appears to have taken root in southern Kalimantan or the Java Sea, during the period of expansion of the Malay state of Srīwijaya. The encounter between these Austronesians and elements from East Africa gave rise to the Dembeni culture in the Comoros; the first settlements appeared in northern Madagascar, in connection with oceanic networks. This was especially the case for the town of Mahilaka, in the northwest. The demand for exotic products such as aromatic resins and rock crystal worked in favor of an Arabo-Swahili advance toward the Comoros and Madagascar during the ninth and tenth centuries. The Austronesian migrants were experts in agriculture, associating rice and yam in humid tropical ecosystems: they first developed the island's wettest regions (its northern and eastern coasts), and soon afterwards, parts of the Highlands. Bantu-speaking migrants occupied other ecosystems, clearing land in drier regions along the western Malagasy coast. They introduced livestock (zebus, goats, and sheep) and brought with them African plant species that were well suited to these zones' conditions, such as sorghum and

legumes (Beaujard 2017). Plants of Asian origin such as the banana, the taro, and citrus were introduced from the Swahili coast, at various times.

Between the eleventh and fourteenth centuries, the Swahili world accelerated its expansion toward the Comoros and Madagascar. In the Comoros, one notes the growing use of stone (carved coral) for buildings, especially from the thirteenth century onward. Arabo-Persian geographers have revealed the progressive insertion of Madagascar into Indian Ocean networks. Until the twelfth century, the Great Island was known as the mysterious island of the western Waqwaq, a term which included part of Africa's southeastern coast; later, Madagascar was known under the name Qumr (Allibert 2001). Relations between the Highlands and the northwestern coast of Madagascar are already discernable between the twelfth and fourteenth centuries, with the discovery of ceramics imported from the Persian Gulf and China. In southern Madagascar, Androy has also yielded imported ceramics; the Androy sites suggest links with southeastern Africa. Most trade with foreign countries, however, was conducted through settlements in northern Madagascar. Mahilaka became a true city during the thirteenth–fourteenth century, with the first known Malagasy stone-built mosque. The rise of Mahilaka clearly echoes that of the Swahili and Comorian cities. The Malagasy themselves used to travel to East Africa to trade; at times they ventured as far as Aden, according to Ibn al-Mujawir. Trade also grew between the various regions of the island, as shown by the spread of some types of pottery (Dewar and Wright 1993).

At the same time, Austronesians continued to arrive on the east Malagasy coast; traditions and toponyms have kept the memory of these migrants under the names “Zavaka” and “Zafiraminia” (these arrivals would continue until the sixteenth century at least). These migrants contributed to the prosperity of new trading centers such as Vohemar (Vohemary), a town located on the northeast coast and active from the thirteenth century onward. The Austronesians brought with them a spatial and temporal symbolism unlike that of the first migrants, as well as new – Malay and/or Javanese – ideas on statebuilding, linked to techniques of intensive wet rice cultivation. Their culture exhibited both Hindu-Buddhist and Islamic (sometimes heretic) concepts, a cultural blending already extant in Southeast Asia (Ottino 1986) and made more complex later by the mix of populations in the Malagasy ports, which probably explains the Bantu influences noted in Zafiraminia societies. These inflows led to various superimpositions or conceptual reorganizations (for example, in color symbolism).

The second half of the fourteenth century corresponds to a phase of decline in Madagascar, clearly noticeable at Mahilaka and in Androy. It was linked to the trade recession in the Indian Ocean at this time and to global climatic changes which led to increased aridification in southern Madagascar. On the other hand, the early fifteenth century saw a new development of the island, with a partial transformation of its networks. This period was marked by the definitive decline of Mahilaka, and the creation of new Arabo-Swahili ports, notably at Langany, further south on the coast. This shift on the northwestern Malagasy interface appears to have been connected to the setting up of new routes toward Imerina, linked to a rising demand for slaves, which were exported to East Africa and the northern Indian Ocean. Fortified villages suddenly developed on hills all across Imerina, where progress in intensive wet rice cultivation underlay demographic growth, bringing social complexification with it.

Receiving textiles, ceramics, and beads, competing chiefdoms provided zebus and slaves to the coastal cities. Along with caravans and merchants, Arab and Swahili representations and practices arrived in the Highlands from the fifteenth century onward. Among these were a lunar calendar, a system of markets, and Arab names for the days of the week. The changes observed in the Highlands were also hastened by the introduction of new ideas. Migrants from the east coast introduced the concept of a strongly hierarchized state, marked by the double divinization of rice and king, accompanied by a partition of the society (and of cultivated plants) into the “whites,” dominant groups related to the sky, and the “blacks,” linked to the earth. This partition would later develop along various lines in several regions of the island. The superimposition of various monetary systems reflects the diversity of influences and exchanges in Madagascar.

Migrants from Indonesia as well as those from the western Muslim world and East Africa contributed to the development of kingdoms along the east coast, particularly in the southeast. Other kingdoms, founded on control over extensive herding and more strongly influenced by African migrants, were also present on the west coast. The flourishing of these kingdoms occurred within the context of internal dynamics of societies exploiting various environments, and in connection with the growing insertion of different regions of Madagascar into regional and transoceanic networks (wide distribution of several types of Malagasy pottery reflects the extension of trade networks along the coasts and in the interior; these networks are also revealed by the presence of Chinese and Islamic ceramics, with the elites of chiefdoms and kingdoms attempting to acquire imported luxury goods, ceramics, textiles, and beads). Arab nautical charts from the fifteenth and sixteenth centuries reveal some knowledge of the Malagasy coasts, but especially knowledge of northern Madagascar, a region which dominated trade with countries abroad.

Connections between the Swahili coast and northern Madagascar led to the increasing use of carved coral in house and tomb building, employing decorative designs similar to those observed along the East African coast; nevertheless, Vérin (1979b) notes “a certain time lag” as well as a simplified deployment of Swahili designs in Madagascar.

The Portuguese intrusion into the Indian Ocean from the end of the fifteenth century onward helped weaken some Swahili cities and helped restructure networks. In Madagascar, it slowed down a process of swahilization taking place along the coasts during the fifteenth century, without leading to fundamental changes to these societies’ trajectories.

The increasing involvement of Madagascar in Indian Ocean exchanges – where the island remained in a peripheral position – thus brought about the appearance of complex and changing cultural blending. In the economic field, while this led to an exploitation of people and the environment, it also enabled a coevolution between the main merchant ports – and regions acting as interfaces between oceanic networks and the rest of the island – and the system’s cores. Some regions enjoyed favorable local conditions. This was the case for the Matatāña valley, in the southeast, where a kingdom developed during the sixteenth century; it illustrates the various types of cultural blending we observe in Malagasy societies, marked here by a strong Islamic

influence linked to various regions of the Indian Ocean (as pointed out above, the “Arabic” writing of the Antemoro was influenced by the Malay and Javanese systems). In Imerina, kingdoms developed based on advances in rice cultivation; these would grow strong enough to shift the balance of power with the coasts as of the eighteenth century. The processes observed here of exploitation and domination on the one hand, and coevolution on the other, can in fact be seen throughout the world-system.

Cores, Semi-Peripheries, and Peripheries: Processes of Domination and Coevolution

From its very beginnings, the world-system was characterized by hierarchy, with its cores and peripheries experiencing interactions producing inequalities among regions and within interconnected societies.¹⁰⁹ These interactions, however, also fostered processes of growth, also linked to local conditions. In the system’s cores, a ceaseless accumulation of capital and demographic expansion grew along with exploitation of the environment and of ever-widening geographical and social peripheries. Elites rose to power, along with social classes which could benefit from a partial redistribution of wealth. Growth in the world-system also led to the flowering of semi-peripheries – areas which found themselves in an intermediary position between the cores and the peripheries – as well as some peripheries, by supporting phenomena of coevolution (see also Chase-Dunn 1988; Sherratt 1993). We should not view cores, semi-peripheries, and peripheries as discrete and static categories; the system in fact shows changing hierarchies and a continuum between peripheries and cores.

Geographic (Diamond 1997) and demographic (Boserup 1998) factors are obviously involved in the inequalities which evolved, but these inequalities also resulted from mechanisms of production and exchange, an exchange which was embedded in religious and political configurations.

Production, Commercial, and Cultural Exchanges, and the Building of Hierarchies

All this in their ignorance they called civilization, when it was but a part of their
servitude.
(Tacitus, *Agricola*, XXI, 3)

Production processes, transfers of wealth, and control over resources, all induced a shifting economic and political hierarchy among the system’s regions, states, and classes, building a transregional division of labor. Efficiency in extracting wealth was a crucial asset for a core vis-à-vis its peripheries and in its competition with other cores. This efficiency rested on various mechanisms. For P. Norel (2009b), four economic indicators helped identify a region’s “centrality” within a system: the desirability of its

¹⁰⁹ Unlike S. Amin, who argues that “the ancient systems had no ‘polarizing’ properties in nature” (1993: 259), A. G. Frank (1993a: 387) points out that the relation core/periphery, from the beginning, implies the existence of hierarchy, since it reflects different structural positions in the process of capital accumulation and its control.

products; performances by its merchants; ongoing current account surpluses; and its ability to structure other (peripheral) regions (Grataloup also defines the centers as “organizational places” [2010: 33]).

Unequal exchanges developed, due to the nature of the products exchanged, the conditions under which they were acquired, and those of the exchange itself.¹¹⁰ Various authors have claimed that, prior to the sixteenth century, it is hard to shed light on the kind of division of labor that Wallerstein demonstrates for the capitalistic modern world-system.¹¹¹ Yet the idea of a center producing manufactured goods and of peripheries delivering raw or semi-manufactured materials and men (usually slaves) is pertinent for periods prior to the sixteenth century:¹¹² relationships between cores and their peripheries were already characterized (although not exclusively) by economic exploitation.

If the manufactured products exported by the cores did permit transfers of wealth, where did their value come from (in the exchange)? It can be argued that manufactured products incorporated labor¹¹³ and (technological) know-how, both valorized during the course of the exchange. Beyond geographical factors, the long-term benefits enjoyed by some regions in production and trade were based on their capacity to deliver mass-produced manufactured goods, with gains in productivity founded on technological and institutional innovations on the one hand, and on an efficient mobilization of labor on the other,¹¹⁴ whether this labor be hired or not (servile labor, work under contract, and so forth). This work was either under the direct control of the state or the private sector, or was induced by taxes and tributes imposed by the elites. The system’s nodal cities welcomed not only a cheap labor force from the countryside, but also merchants, artisans,

¹¹⁰ It is generally thought that exchange is or was beneficial for all parties concerned. A close reading of the facts reveals a more complex reality. Exchange can be mutually profitable (especially for certain social groups), but this does not necessarily mean that there is equality in exchange (that is, an exchange that would allow the gains to be similar), except between regions of similar power or in the case of peculiar local conditions. A “beneficial exchange” can be accompanied by increasing inequality. The theory of “comparative advantage” advanced by Ricardo is indisputable from a mathematical standpoint, on the basis of his specific hypotheses (value assessed through gross labor time, immobility of factors of production between countries, and so forth). But it can also be seen as the “theoretical justification” for a situation of domination wherein “one nation constrains others to engage in specialized production to suit its own interests” and attempts to characterize a historical situation as fixed and inevitable (Partant 1997: 83). Moreover, Ricardo describes the world as made up of local units (Friedman 1994: 2); yet the world dynamic of capitalist development “is more than the sum of national dynamics; it is something that can be perceived only if we take as the unit of analysis not individual states, but the system of states in which world capitalism has been embedded” (Arrighi and Silver 2001: 258 n. 8).

¹¹¹ Kohl (1987) argues that there was little difference in technology between cores and peripheries during the Bronze Age. However, the differences in levels of technology appear to have been enough to produce inequalities, with other factors playing a role, such as geographical data, demographic weight, institutions, and ideological power.

¹¹² Here, I do not share the reservations expressed by Chase-Dunn and Hall 2000: 91–92. Ancient Mesopotamia, mentioned by these authors, in fact offers a good example of these mechanisms, with exports of textiles and metallic items.

¹¹³ Cores and peripheries, notes Wallerstein (1984a: 15), exchanged “products containing unequal amounts of social labor.” According to Marxist perspective, value derives from the total amount of socially necessary labor required to produce goods or acquire raw materials and slaves.

¹¹⁴ Expanding foreign trade fostered a widening in the division of labor in the cores, which helped improve productivity; expanding trade also encouraged innovation, which in turn allowed external markets to expand. On this link between Smithian dynamic and Schumpeterian growth, see Norel 2009a.

and slaves from distant lands. During the Tang period, one could thus encounter East African people throughout the Indian Ocean and as far as China. The Muslim world of western Asia and Egypt imported slaves from East Africa and western Sudan, but also from Central Asia and “the country of the Slavs.” Accompanied by a division of labor at both the regional and transregional levels, the urban ascent of the cores allowed them to combine flexibility in production with fluidity in their organizational systems, much more so than was possible for their peripheries, where chances of increasing supply could be limited or inexistent (the increasing difficulty of procuring gold and ivory in certain regions of East Africa is a good example). Alpers has used the concept of work-value to describe the exploitation of Africa during the modern period: “What the Africans received in exchange for slaves in no way equalled the labor power lost to each society . . . [In exchange for slaves, ivory, and gold], the Africans received [only] inexpensive consumable goods” (1975: 266). The low cost of these goods in the core resulted above all from gains in productivity and low wages.

It may be argued, however, that it is the exchange itself that first “determines economic value.” The intrinsic value of the object exchanged – measured by labor and capital inputs or by its essential utility – determines exchange value only to a small degree: it is thus time to “abandon the notion of [intrinsic] value and focus on the exchange itself and the violence it contains” (Aglietta and Orléan 2002: 25, 141). Two factors, which were linked and reinforced each other, were essential for establishing power relations between regions: 1. the socially built *desirability* of the manufactured products exported by the cores,¹¹⁵ and 2. the setting up of *monopolistic* or quasi-monopolistic situations in the exchange.

A manufactured object has a social utility which is partly determined by its nature, and partly by the materials and technology used in making it, but even more so, by its capacity to create social hierarchies, these in turn being linked to cultural systems and to power relations between the producer/exporter and the consumer (note here that the etymology of the word “prestige” is the Latin *praestigium*, “illusion, trick, deception”).¹¹⁶ Imported products were desirable for several reasons. Using imported exotic products, elites in the peripheries could participate in long-distance exchanges and weave their own (supra-)local networks. These goods helped the elites bolster and materialize differences in status within their societies. The monopoly over prestige goods enhanced their possibility of capturing more people: wives, slaves, soldiers (see Ekholm 1972, for the Kongo kingdom). These goods were also used in the tombs (see above). In addition, acquiring goods exported by a dominant core allowed receivers to capture and use a bit of that core’s power: the ideological power of the cores led people in the peripheries to interiorize their status as the dominated party. In East Africa and Madagascar, Chinese celadons and porcelain were thought to have protective and beneficial power (and to detect poisons). Glass beads were valued for their magico-religious properties (Helms 1988). Imported products also

¹¹⁵ “For things to become commodities, material production is not sufficient. They must also have been culturally built as traded goods under certain conditions, also built” (Kopytoff 1986; Roitman and Warnier 2006: 206). See also Appadurai (1986); Aglietta and Orléan (1998a, 2002).

¹¹⁶ The notion of utility should thus be conceptualized, not just in terms of basic physical needs that must be met, but rather as “needs” which are the expression of a desire to possess exclusively.

helped the elites to solidify clientelistic relationships which went beyond kinship, thus helping to build (proto-)states. The elites of East Africa were therefore willing to encourage and even promote the extraction of raw materials and the slave trade in order to obtain imported prestige items, articles which they redistributed later on, but to a lesser extent. The various processes contributed to an increase in the desirability of imported products.¹¹⁷ The Portuguese captain António da Silveira wrote in 1518 that “without imported goods, the [Mutapa ruler] would not have been able to raise an army” (Randles 1975: 45). As Alpers (1975: 265–266) points out, “if Africans wished to continue to receive goods from abroad, they necessarily had to provide those goods that were required.”¹¹⁸ When Rothman (2001b: 355–356) observes that “all players must be willing to play, or the game simply never happens” (2001b: 355), he fails to mention that the players are not all at the same level and that some are forced to play. Historical data show that textiles, in particular, as markers of both status and wealth, have been powerful weapons of exchange since the origin of the world-system (on both ideological and commercial levels) for the cores and semi-peripheries which exported them (Schneider 1977): these included silk from China, India, and later from Iran and Byzantium; cotton fabrics from India; and linen or wool materials from western Asia and Egypt (see also Sherratt 2004). In East Africa, Shirazi legends recounting the purchase of the island of Kilwa clearly illustrate the importance of

¹¹⁷ Many authors have pointed out the key role played by “prestige goods” in the economic and political developments of ancient societies, and their ability to generate power and to legitimize it: see Ekholm 1972; Friedman and Rowlands 1977; Schneider 1977; Appadurai 1986; Peregrine 1991; Sherratt and Sherratt 1991; Helms 1993. There were no structural changes in a margin in relation to a core, notes A. Sherratt, as long as the elites did not depend on the goods they imported (1994b: 340).

¹¹⁸ East Africa offered a good example of the various mechanisms through which the dominant regions extracted wealth from dominated zones (Beaujard 2007a, b). Inland Africa exchanged gold, ivory, and slaves for manufactured products. As Horton and Middleton point out, “the trading relationship between the coast and the interior has always been asymmetrical – one of exploitation of Africa by the outside world” (2000: 102). Researchers such as M. Pearson who contend that exchange was not unequal on the East African coast, but was beneficial to all parties involved, at the same time are choosing to downplay the mechanisms of exploitation, and underestimate the level of trade – in terms of volume, time, and space; they are also choosing to ignore the social stratifications generated by long-distance trade and the prolonged existence of a slave trade. By advocating the idea that societies had the means to “choose” the ways exchanges were conducted (or not), these authors refuse to envision the processes of dominance and the fact that the desirability of products or the behaviors of the players along the various networks were largely the result of relations of power. Long-distance trade fostered the development of social stratification in the societies of the Limpopo valley and later of Zimbabwe between the tenth and fifteenth centuries, although local factors were also significant (Beach 1994; Pikirayi 2001; Swan 2007a). In Africa, statutory distinctions were often associated with matrimonial circuits in which prestige goods allowed for the payment of “the bride price.” These goods were also used in tombs (see above). It is true that “social peripheries” benefited from some redistribution of wealth; however, this redistribution was primarily for social groups close to the centers of power (socially and geographically) and for their clients; and these processes of redistribution occurred mainly at times of growth. The fact that an individual from the periphery “accepts” to give his labor in exchange for the acquirement of a coveted exotic product does not mean that there is no exploitation; rather it reflects the power of the ideology of the cores and of the politically dominant powers, as well as that of the social stratifications that are built up.

textiles.¹¹⁹ Rolls of silk or cotton fabric were used as currency in the Indian Ocean, at various times. The cores also exported other products: ceramics (Chinese porcelain from the seventh or eighth century onward; ceramics from the Persian Gulf . . .); glass (Roman world, western Asia, Egypt, India);¹²⁰ metallic objects (the Roman world, western Asia, India, China); stone beads (India); narcotics;¹²¹ and alcohol, spices, and aromatics.

Several scholars have advanced the curious idea that because raw goods exported by peripheries (such as gold and ivory from East Africa) often had little or no local use value, one cannot characterize the exchanges as unequal. An opposite view could be argued: the fact that raw materials were of little value for people in the periphery, in contradistinction to the desirability of imported products, helped create unequal exchanges. Rulers in the peripheries were obviously aware of the potential value of raw materials and slaves for exchanges with the outside world, but usually they could not evaluate the cost of obtaining these goods or impose an exchange value for them.

Let us reverse the previous argument: from the perspective of the cores as well, the goods that they exported (e.g. beads) had little local desirability in contrast to the raw materials that they imported. Moreover, the manner in which each party envisioned – according to its own society's mores – the potential economic and political gains to be had from an exchange partly determined the conditions of that exchange. Deeper scrutiny, however, reveals that the two situations were not in fact mirror equivalents. First, the goods exchanged were not similar: they were mainly raw materials on the one hand, and manufactured products on the other; merchants in the cores were able to evaluate the costs of producing, transporting, and transacting these products and were able to compare them with the potential profits to be made from the raw materials. The social use of prestige products imported by the African elites partly explains the indifference of these elites to calculations, since such goods usually did not enter market exchanges. Second, it must be kept in mind that cores controlled trade routes (either directly or indirectly) and information. Exchange was coupled with political and ideological power relations, and helped shape these relations.

The production and marketing of goods benefiting from particular qualities – whether real or imagined – was the first form of monopoly mentioned here. Other monopolies were built up in the exchange field. Dominant regions benefited from exchanges because they had the means to fix the terms. Cores and semi-peripheries were in a position to impose their products and their prices, directly or indirectly.

¹¹⁹ Horton and Middleton 2000: 111; Beaujard 2007a. For the Swahili, “clothing socially defines the person who wears it” (Middleton 1992: 197), as does the use of jewelry and perfumes from Iran, India or Arabia. The association of the cores with textile production was linked to technical knowledge, the desirability of the products manufactured, and the exploitation of a cheap labor force. Almost everywhere a symbolic connection is established between textile weaving and the building up of society (see Sherratt 2004).

¹²⁰ The significance of the glass beads, in East Africa for example, has been pointed out. Ekholm (1972) also shows how European beads replaced the *Olivancillaria* shells in the Kongo kingdom as prestige goods connected to power.

¹²¹ Curiously, J. Barendse (2000: 178) takes opium as an example of “raw material” exported by a core, in a passage in which he attempts to demonstrate that unequal exchange did not exist, since the cores also exported raw materials. The key issue, moreover, is not whether raw materials were exported, but what was the share of the raw materials in the exports.

The exchange value of goods exported from peripheries – consisting principally of raw materials and slaves – remained low mainly due to the unfavorable exchange rates imposed by the cores¹²² (moreover, as just pointed out, the absence of exchange value for the raw products exported reinforced this process). Through their control of the means of communication and information, cores – and, to a lesser extent, semi-peripheries¹²³ – were guaranteed access to resources and markets and were able to choose among competing peripheries; likewise, they attained the dominant role in the dialectical relationship of supply and demand, which allowed them to orchestrate scarcity and monopolize knowledge, among other things. Semi-peripheries also used this strategy: Horton and Middleton (2000: 90) note that the Swahili restricted the diffusion of certain types of goods imported from overseas and manufactured their own products for export to their peripheries inland and on outlying islands. They did not seek to spread Islam into the African interior, but instead purposefully retained control over it “[as a] monopoly” (it is a general feature, in fact, that elites tend to control both technological innovation and its transfer [Peregrine 1991; Costin 1998]). It was more unusual for them to try to prevent the spread of their religion, since such diffusion often gave the advantage to dominant regions [but see Helms 1988: 151]).

Able to trade with many sellers, foreign merchants were in fact in a situation of oligopsony – except with regard to gold. Elites in peripheries and semi-peripheries who had to bear these unfavorable rates of exchange tried to “compensate” by exploiting their own social and geographic margins in turn. Even when cores and semi-peripheries did not control trade routes directly, they were able to rule from a distance (economically and culturally), with various groups acting as intermediaries helping to build up chains of dominance. We see this clearly in the links established by East African merchants with client groups from their hinterland,¹²⁴ with slaves forming the end of the chain. Contrary to Stein’s assertions (1999: 62),¹²⁵ a core’s power over a region does not necessarily diminish, nor do exchanges become more “symmetrical” when distance increases.¹²⁶

¹²² In relation to unfavorable exchange rates imposed from outside, the remuneration of work in peripheries can also be weakened by low productivity in the process of acquiring the goods these peripheries export.

¹²³ Merchants from the peripheries did not travel extensively along these routes. See also Arrighi 1994: 38. Trade agents, men of religion, as well as diplomats – when they begin operating on a permanent basis, as in Italy during the fifteenth century – played a crucial role in the gathering and circulation of information. While, between the first and sixth centuries, merchants from China were rarely to be seen in the southern seas, they were not completely absent (see the *Qianhanshu*, ch. 28B, Needham *et al.*, 1971: 443). The place of the Chinese ships and traders in maritime networks, however, remains a subject of debate; even during the Tang period, the Chinese did not venture much to Southeast Asia. In contrast, we know that the Yue from the Canton region (who were linguistically non-Chinese) were in contact with the southern seas as early as the Warring Kingdoms period.

¹²⁴ Middleton 1992: 19; Pouwels 1991: 381; Horton and Middleton 2000: 96–97; Vernet 2005: 366–369, 524.

¹²⁵ G. J. Stein (1999) rejects the “world-system model” (presented in a caricatured Wallersteinian version) and presents the “concept of diaspora” as an “alternative.” The functioning of the diasporas is in fact part of the overall context of the system.

¹²⁶ Slaves imported by dominant powers usually came from the geographical margins of the system, where they were obtained in exchange for trinkets (margins were regions either not integrated or weakly connected to this system). It is therefore difficult to assume that the degree of asymmetry will level off toward the outer edges of the system. Writing about the exchange value of bronzes in the Baltic region during the Late Bronze Age, A. Pydyn also notes that “prestige goods first of all have an exchange value; this value usually increases subject to the distance [in both a geographic and cultural sense] which

While it is true that a politically weak merchant diaspora might have benefited from an alliance with the rulers of a region with which it conducted trade, this is not incompatible with the fact that this merchant diaspora may have been economically and ideologically dominant, and linked to a strong political power (*contra* Stein 1999: 53–54). When diasporas (such as the southern Arabs, the Austronesians of insular Southeast Asia or the Sogdians of Central Asia during the first millennium)¹²⁷ were not direct vassals of a core, they could nonetheless further that core's economic and cultural domination by raising prices, intensifying the desirability of products exported by the cores and opening new markets, while taking advantage of their own situations as middlemen. When a diaspora involved in exchanges did not belong to an exporting core, this may have diminished the transfer of wealth toward this core, but it could also boost its exports. It is true, however, that some diasporas acted autonomously, as Stein has suggested, or were “manipulated” by local powers. Thus, the Kharijite networks active in the southern Sahara during the eighth and ninth centuries were not dependent upon the regional metropolis of Kairouan. During the fifteenth century, the Ming rulers encouraged Chinese merchants who had settled in Southeast Asia to return to China, and in some cases eliminated them by force. Following Curtin (1984) and Bentley (1993), Stein's emphasis on diasporas is useful in introducing more complexity into the model and in putting forward the importance of local developments and strategies. It may be “part of the logic of diasporas to relax their links with their communities of origin after a few generations” (Norel, p.c.). The story of the merchant Abū-l-‘Abbās, who returned to Cairo in 1118 after forty years in China, describes one of the mechanisms that is possible: “The children he had had from slave concubines, for example in India, Sri Lanka and Abyssinia, spoke the languages of these countries and acted as his agents” (Rosenberger 2000a: 251).

Because dominant powers controlled commercial routes and markets, they were able to retain any profits arising from gains in their manufacturing productivity. Gains in labor productivity in the cores did not necessarily lead to price decreases in their exported manufactured products (a lower price could, however, promote growth in foreign trade). Conversely, should the peripheries (or even some semi-peripheries, such as the Swahili coast) achieve any gains in productivity or produce manufactured goods suitable for export, they rarely benefited from such gains: their access to external markets was limited and their capacity for negotiation was usually weak.¹²⁸ During the

separates producers and consumers” (2000: 230). In the remote hilly Tañala region (southeastern Madagascar), where I did field work, peasants today are obliged to sell their raw products (coffee beans, rice, quartz) to Chinese and Indian merchants who, in turn, sell them cotton cloth and prestigious textiles – used by the chiefs – at prices much higher than those found near the coastal road or the rail line. This situation is not “pre-modern,” but it is nonetheless a useful illustration on several levels. The increased prices for manufactured goods in geographic margins are due in part to the cost of transport, but also to the quasi-monopoly held by some merchants.

¹²⁷ Other diasporas of the Indian Ocean were linked to several cores and semi-peripheries (for example, Jewish networks in the eleventh and twelfth centuries), inducing a share of “surplus” between these regions.

¹²⁸ Gains in productivity in such cases often led to increased production and to a deterioration in the terms of exchange because cores largely determined the exchange rate. The deterioration in the terms of exchange was linked not only to the fact that centers and peripheries specialized in different types of products (manufactured/raw), but also to ideological and political factors (see below).

fourteenth and fifteenth centuries, for example, Mogadishu produced textiles which were exported to Egypt, but the city was dependent upon Yemeni or Egyptian vessels for shipping; it had neither ships in sufficient number nor the necessary political power to impose itself on networks controlled by *kārimī* or other merchants. Mogadishu was therefore unable to benefit fully from the existence of other markets.

Cores and semi-peripheries also influenced the forms of currency used, since the adoption of a currency in transregional and regional exchanges was partly the result of a power relationship. The drain of currency from a core toward other countries did not necessarily express a situation of weakness.¹²⁹ Money, in fact, did not have an exclusively economic dimension. The acceptance of a core's currency played a role in the ideological domination of this core, allowing it, in a sense, to leave peripheral populations free to work with its money.¹³⁰ Between the ninth and fifteenth centuries, several types of Islamic currency or imitations of them were in use in East Africa (silver was imported). In the China Sea, also, Chinese currency was imposed from the eleventh through the fourteenth century. It was later copied in several places, notably in Java.

To paraphrase Breton (2002: 14, 23), it would seem that exchange rates reflected the “value and relative positions” of the societies or groups within systemic or regional hierarchies as much as it determined the value of the goods themselves.¹³¹ These positions were linked to global factors and to local conditions. The relationships between regions “were richly complicated by [economic,] historical and cultural contexts” and the agency of the peripheries was sometimes “far greater than the model presumes” (LaViolette 2008: 25). Kardulias (1999), who speaks of *negotiated peripherality*, correctly emphasizes the extent to which researchers have usually paid too little attention to the capacity for negotiation on the part of peripheries and to actions of resistance (see also Parkinson and Galaty 2007).¹³² Moreover, exchanges were set up under conditions that were particular to each

¹²⁹ Lieberman (2003) rightly criticized Frank for the correlation established by this author between commercial surplus and efficiency in production. It is true that “the surplus on the trade balance does not have to be permanent; what matters is its average level over the long term. Moreover, even if there is a deficit, the main point is that external trade progresses in comparison to production, which means a crucial stimulation of the production and therefore of the creation of national market systems” (Norel, p.c.). In fact, not only is the surplus on the trade balance unnecessary for obtaining a dominant position, but the Spanish case in the sixteenth and seventeenth centuries shows that massive imports of precious metals, over the long term, can have deleterious effects: it led to internal debts and to a commercial deficit, and above all, it made the Spanish cease manufacturing, inducing a general weakening of the country on the international scene (Bensimon, p.c.). Spain, however, developed an important textile industry during the sixteenth century, and it was only at the end of this century that the decline was obvious.

¹³⁰ Warnier (1985: 143) also notes for the Bamenda plateau (Cameroon) during the seventeenth–eighteenth century that “the community which dominated commerce at long-distance imposed its money.” Servet *et al.* (2008), however, express a different point of view. For these authors, pluralism of money was more the rule than the exception until recent times; there can be no general discourse on the link between domination and money.

¹³¹ One may argue that not all individuals, groups or societies have the same “power of assigning value” to the goods that are exchanged, and the world-system can be characterized through its “valorization power structures” (Eymard-Duvernay 2007).

¹³² Nevertheless, the cores and, to some extent, the semi-peripheries shaped the world-system; although it was sometimes locally successful, resistance by the peripheries rarely altered the fundamental course of

society; it is important to look at the “local specificity of a transaction” (Pomeranz and Topik 1999: xv).¹³³

Core domination could be masked or lessened and even inverted by the ways in which an exchange was set up and organized, with (semi-)peripheral elites controlling the movements of coveted goods. Able to exercise military pressure or benefiting from a strategic position, some peripheries or semi-peripheries enjoyed a particular capacity for negotiation; examples include the Xiongnu from the first through the fifth century; the Kōk Turks of Inner Asia from the sixth to the tenth century; Srīwijaya between the eighth and thirteenth centuries, and others. Attacks occurred mostly during periods of economic recession, or during times of ecological and social crisis.¹³⁴ On the East African coast, before the Portuguese arrival, control over the Sofala gold trade by the sultan of Kilwa – as well as the island’s particular location (Fleisher 2004b: 97) – gave the sultan a power of negotiation not attained by the rulers of other Swahili city-states. Some inland groups had the means to set better terms of exchange with the Swahili.¹³⁵ Some peripheries were also able to play off competing cores against one another, or take advantage of political struggles within cores.

From one cycle to another, the expansion of the world-system was accompanied by the increasing incorporation of ever-larger peripheries, which induced the development of interactions and a process of structural interdependency between zones.¹³⁶ Levels of incorporation were not similar in all regions. They shifted also according to

this system, except in the case of the nomads of Central Asia (see below), but this region in fact should be viewed as a semi-periphery.

¹³³ Although the (semi-)peripheries were not “passive,” they were often “victims.” To give an example, this time in West Africa, in Senegal in 1770 (Pomeranz and Topik 1999: xiii), an African chief refused to trade with a French merchant who offered beads and other trinkets for slaves: he wanted English or Dutch pieces of furniture. This refusal does not mean that the exchange was equal. The anecdote merely reveals that the African chief had some capacity for negotiation, thanks to competition between European merchants.

¹³⁴ The violence of peripheral populations during periods of recession reflects their crisis situation: these populations are led to take by force what they can no longer acquire by other means. The peripheral populations also react to the violence first perpetrated by dominant states and groups.

¹³⁵ G. Stein’s statement that “the assumption of core dominance denies any kind of agency to the periphery,” which is considered as a “passive victim” (1999: 19), is an unfair criticism of the world-system model. All the peripheries, and even more so the semi-peripheries – a concept disregarded by Stein – were not mere “victims.” They were able to negotiate a better deal than others. As E. Wolf points out (1982: xvi), within peripheries, “the common people are as much agents in the historical process as they are its victims and silent witnesses.” In addition, the fact that the victims are not passive does not necessarily prevent them from being victims; the fact that foreign merchants had to negotiate their presence does not mean that they were not economically dominant. In addition, it is ironic that the study of the links between Europeans, Chinese, and Hawaiians during the eighteenth and nineteenth centuries put forward by Stein (who considers China as a “periphery”!) does not contradict the world-system model, but on the contrary offers a good example of the setting up of processes of domination within this system (1999: 20–21). Regarding the connections between the Roman Empire and the German world, also, Stein argues for “symmetrical exchanges,” whereas the Romans exported “mass-produced” manufactured products exchanged for raw materials and slaves; he also aptly puts forward the impact of the “ideological power” of Rome (1999: 38).

¹³⁶ Interdependence increases with the level of incorporation of the peripheries within the system (on processes of incorporation, see Hall 2006). Note that the relations between peripheries modified the processes of incorporation (Hall 1989, for California).

the pulsations and restructuring of the system. Societies may have resisted incorporation, either because contacts were perceived as dominated by outsiders, or because these societies feared that long-distance trade would have a destabilizing effect, with the intrusion of (new) prestige goods inducing increased social complexity that would undermine their societal values. The victims of slave raids, however, could in fact belong to “marginal” societies trying to avoid regional exchange.

In sum, it is clear that some regions’ capacities for negotiation and resistance were genuine; agency and resistance, however, were matters of degree, and could change over time, as shown by the example of Kilwa on the East African coast.

Thus far the focus has been on technological and institutional advantages, and on commercial exchanges, in order to follow the processes of domination and coevolution, but two important points should be made. First, commerce was not the only means of transferring wealth: transfers were also conducted through religious networks and political domination. Second, transfers of wealth were not the only means by which cores and semi-peripheries could establish their domination.

To establish domination, cores made use of ideological and political power, acting via diverse strategies such as the imposition of taxes and tribute; colonization; alliances; intermarriages; religious conversions;¹³⁷ and armed force. Demographic advantage was a crucial factor: it allowed for important investments in agriculture, industry, and the building up of powerful armies.

Of course, ideological, political, and economic forms of power were interconnected and operated in synergy. The spread of Islam and Christianity appears to have been tied to political and economic relations. Speaking of the Europeans, A. Sherratt (2000) expressed this as follows: “The missionaries taught the natives that they were naked and the merchants sold them cloth” (2000: 121).¹³⁸ Men of religion were themselves often merchants. Although the episode narrated by Ibn Battūta about Kilwa belongs to the category of “edifying tales” and is built on oral traditions (Hirsch and Fauvelle-Aymar 2003), the author has nevertheless succeeded in sketching, in just a few lines, the chain of domination that extended to the African hinterland, revealing some of the ways used by dominant regions to extract wealth from dominated areas (1982: 90). One sees that exchange is a power relationship, backed by both ideology and arms, and that the level of inequality in any exchange is proportional to the gap that exists between the

¹³⁷ Religions and ideology played a crucial role in promoting control of the cores by their elites, the expansion of these cores, and the structuring of their domination over peripheries. An example of this is the “spontaneous” conversion to Christianity by the Kongo king and his higher officials in 1491 (Ekholm 1972). Kardulias (2007: 76) notes for Canada during the seventeenth and eighteenth centuries: “The Europeans often used their particular brand of Christianity as another means of solidifying trading relationships . . . The conversion of native communities at the outset was probably not complete, and thus set up internal divisions.”

¹³⁸ See M. Newitt 2002, for the Portuguese activities in East Africa, in which trade, politics, and evangelical mission merged. The conversion of the elites of (semi-)peripheries to the religions of the cores helped these elites legitimate their power. The rulers of Southeast Asian states thus adopted Buddhism and Hinduism during the first millennium of the Christian era. At the same time they borrowed the symbols of power: writing and the language (or elements thereof) of the Indian dominating powers. J. D. Tracy (1991: 16) states that “Early Southeast Asian states made extensive use of ritual as a means of attracting and maintaining support” of their populations or peripheries: tributes were presented to the king for ceremonies ensuring the well-being of the kingdom.

two parties as measured in terms of technology, military strength, and social complexity.¹³⁹

The expression of an aggressive strategy on the part of the cores and semi-peripheries, the creation of empires and, generally speaking, any decision to go to war¹⁴⁰ were all attempts to control directly – and by force – the routes and centers of accumulation of the system (or parts of the system) in order to increase the wealth extracted. Various political constructs have tried to form “universal empires”: examples include the Achaemenid Empire; the empire of Alexander the Great; the Roman Empire from the reign of Augustus onward; the Mongol Empire of Genghis Khan and his successors . . . Raids and conquests, even when temporary, made it possible to capture booty, deport populations, and exact tribute. For the Indian and Pacific oceans, economic and cultural integration proved more efficient than force: resources were extracted through trade, taxes, and gifts, and more rarely through raids or a military presence. Nevertheless, the dominant regions within the system sometimes resorted to violence.¹⁴¹ Central powers thus intervened in semi-peripheries: Oman was taken by various Iranian states; Yemen was occupied successively by Axum, Sassanid Persia (sixth century), and Ayyūbid Egypt (twelfth century); Yuan China launched expeditions to Java and Champa during the thirteenth century,¹⁴² and so forth. In the twelfth century, the rulers of Qays Island (Persian Gulf) carried out raids on the Zanzibar coast in order to obtain slaves. Some far-off semi-peripheries also resorted to violence, such as the Austronesians’ attacks on Pemba during the tenth century.

The voyages of the Ming imperial fleet during the early fifteenth century are the only known example of politico-military and economic intervention at the level of the entire Indian Ocean prior to the arrival of the Portuguese. The Ming aimed not at conquering or controlling territories, but at including other powers within the Chinese tributary system; their actions were on that point in sharp contrast to the imperialistic European practices initiated by Venice and Genoa starting in the twelfth century (Mielants 2007: 60–62).

Whereas the processes of production, conditions for exchange, and ideological and military power, all created favorable conditions for domination by the cores and for deterioration of the terms of trade between these cores and other regions, peripheries and semi-peripheries were never passive; some were able to benefit from the cores’ growth and move up in the hierarchy between regions; at times, they acquired dominant positions of their own within the system.

¹³⁹ The economic theory, as M. Weber has already pointed out, is “unable to shed light on power relations intervening in relationships of exchange” (Lallement 2004: 56). On the significance of power relations in exchanges, see also Coleman 1990.

¹⁴⁰ Two situations must be distinguished: the building of large states through war during periods of growth, and conflicts which broke out during periods of recession, when states sought “through war what they could no longer obtain through trade” (Arrighi 1994: 99).

¹⁴¹ In contrast, C. Chase-Dunn and T. D. Hall argue that in world-systems, “socially structured inequalities rested more on political/military power than on economic power” (1997: 13). It is true that within subsystems, or within their components, power relationships often relied upon political and military interactions. D. Wilkinson (1987) has placed special emphasis on the importance of politico-military power.

¹⁴² It appears to be incorrect to state, as Barendse did (2000: 178), that “commerce normally was not conducted by armed force” in the Arabian seas.

Coevolution and Shifting Power Centers

There were gradations as well as spatial and temporal variations in the grip any core held over its peripheries. This depended upon history, on the distribution of resources, and on sociopolitical conditions in the various regions under review. A periphery might well be the region apparently benefiting most from the exchange.¹⁴³ As has been the case in the modern world-system, relations between the cores of the system and its peripheries had an “underdeveloping effect” on some peripheries – but not on all of them.¹⁴⁴ Interdependence, however, also led to various types of growth in the regions thus connected. The evolution of the world-system prior to the sixteenth century thus shows contrasting situations, including not only the exploitation of geographical and social peripheries by a core (peripheries most subject to domination were likely to be the weaker social groups within the core, and those lying within the core’s geographical edges),¹⁴⁵ but also phenomena of coevolution.¹⁴⁶ During the periods of expansion of the system, especially, some regions and groups were “lifted up” by exchanges with cores and other peripheries, when they were able to profit from growing market demands for raw materials and manufactured products – with the help either of technological imports from the cores or of their own innovations – or whenever they could act as intermediaries in the transport of merchandise. Interactions with the cores helped form secondary states – for example, the empires of Central Asia, seen as “shadows” of the Chinese empires¹⁴⁷ – or city-state cultures such as the one that grew up along the East African coast during the early Christian era. The concept of semi-peripheries – regions mixing the techniques and institutional features of cores and peripheries – sheds light on the process of urban development along this East African coast, as well as on the indianization, and later the islamization – sometimes by Chinese who had converted to Islam – of Southeast Asia, situated between the Chinese and Indian cores. These processes were marked by the creation of the state of Funan in the first century and of the thalassocracy of Sriwijaya during the seventh century; the expansion of Mojopahit in the thirteenth and fourteenth centuries; and the flowering of the city-states of Pasai

¹⁴³ For example, trade between the Muslim world and the Russian steppes during the eighth and ninth centuries led to an inflow of money toward the north. There was a clear link in eastern Europe between the emergence of states and increasing trade with the Muslim world. One may wonder who primarily “took advantage” of the exchanges within the “Russian periphery” (certainly not the slaves exported toward the Muslim core). It is clear, however, that there may be a deterioration in terms of trade between a core and a periphery or a semi-periphery in favor of the latter; this can be seen when China was in a position of weakness against the steppe nomads.

¹⁴⁴ See Frank 1970; Emmanuel 1969; Amin 1981. From the start of the Industrial Revolution onward, there was a growing divide between the core and certain peripheries due to rapid technological and social developments in the core; this process was much more significant than in ancient system(s). These innovations were just one amongst various instruments of power involved. On prices and wages, two opposing prospects were put forward. For Emmanuel or Amin, wages determined the structure of international prices; according to Braun (1973), prices were the primary variable.

¹⁴⁵ Everywhere, the building of unequal exchange on long-distance markets and domestic exploitation were processes that worked in synergy (this is especially clear for the European city-states) (Mielants 2007: 146).

¹⁴⁶ Chase-Dunn and Hall (1997) write of *spread effects*, which tended to homogenize centers and peripheries.

¹⁴⁷ This was not always the case, however; some empires of the steppes flourished when a major Chinese empire broke down (see above).

(as of the thirteenth century) and Malacca (fifteenth century). In addition, the rise of these (semi-)peripheries was inseparable from local developments: trajectories of societies partially resulted from internal dynamics which, in turn, modified regional evolution.

This perspective allows us to move beyond the old debate between supporters of an external type of “colonization” and those preferring the concept of indigenous development. “Agents” of the cores (or other semi-peripheries) were present and active in the merchant towns of the peripheries or semi-peripheries.¹⁴⁸ Their alliance with local elites or groups emerging as elites (alliance through trade, intermarriage, the formation of blood brotherhoods, and the religious conversion of these elites [see above]) enhanced the flourishing of centers acting at the interfaces of cores and peripheries. These alliances resulted in the ideological, economic, and political configuration of the Swahili coast; this increased its dependency and transfers of wealth toward the cores, but it also favored the development of this semi-periphery during periods of growth. The local elites took advantage of this dependency, which was expressed in the daily way of life, by exploiting the margins of their sociopolitical entities.¹⁴⁹ The Swahili thus benefited from technological transfers in Indian Ocean exchanges, thanks to the presence of Arab, Persian, or Indian craftsmen who settled in their cities; these transfers, however, were limited by the geographical and human data of the East African coast. To some extent, they also benefited from their adhesion to the Muslim world.¹⁵⁰ Transfers of technology played an important role in the expansion of the empires of the steppes, particularly in the case of the Mongols, who were able to use Chinese metallurgical techniques and who employed weapons such as gunpowder, which had been produced earlier by the Chinese (Elvin 1973: 18; see above).

The elites of semi-peripheries sometimes had a clear understanding of the mechanisms within the world-system and of the benefits and losses involved in their position as interface. According to the Arab historian al-Maqqarī (1577–1632), a Tlemcen king declared: “If I did not fear to act in a detestable way, I would only let settle in my country merchants trading with the Sahara, as they take away cheap products and come back with gold, a metal to which everything is bound nowadays; the other merchants export our gold and give us in exchange objects which are soon worn out or worn away; they also change our customs and lead the fools into corruption.” These “other merchants” were mainly Europeans: Egypt and, still more so, Europe greatly profited from a growing trans-Saharan trade between the thirteenth and sixteenth centuries.

¹⁴⁸ Other emergences resulted from processes of colonization. Thus, Madagascar, populated by Austronesians during the first millennium CE, and the Phoenician and Greek cities founded in the Mediterranean during the first millennium BCE.

¹⁴⁹ Of course, peripheries cannot be considered as homogeneous blocks. Elites have often managed to ensure monopoly on contacts with foreigners. The case of the Kongo kingdom here is enlightening (Ekholm 1972; Friedman 1994: 9).

¹⁵⁰ The development of trade relations with the external world also stimulated exchanges between the Swahili towns and their hinterland and fostered the formation of chiefdoms; the relations of the coastal cities with the interior were based mainly on alliances and not so much on military power (direct violence – which accompanied the slave trade – usually affected more distant regions). This ability to form alliances probably explains – alongside geographical data – the stability of the Swahili cities, despite their apparent fragility. For Southeast Asia, also, see Manguin 2000b, 2004.

The possibility of coevolution first depended upon the geographic or human assets of some regions or classes in connection with their cores; favorable local conditions allowed them to take advantage of the system's dynamics, through exchange growth and the phenomenon of capital decentralization, on the one hand (Friedman 2000: 142), and transfers of knowledge and innovation, on the other. Semi-peripheries were often among the most mobile regions of the system. Southeast Asia, immense and diverse, and able to utilize various exchange networks between China and the Indian centers, provides a good example of a complex semi-periphery where major transfers of dominance occurred from region to region. Those areas that were well located along trade routes and enjoyed great demographic potential proved able to incorporate technological innovations and to produce for export; they managed to take the upper hand: this was especially the case in Java. The semi-peripheries adopted social and technological features from the central zones, thus helping to propagate the ideology of the cores, but they were also very often sites of technological innovation (sometimes through import substitution),¹⁵¹ particularly during phases of expansion of the system. The spread of alphabets in Palestine and at Ugarit around the fourteenth century BCE, the development of navigation in South Arabia and Southeast Asia (especially at the turn of the Christian era),¹⁵² the proliferation of banking techniques and of "republican" organizational forms in Italian cities from the thirteenth century CE onward are all examples of these processes.¹⁵³ During periods of political disaggregation, core/periphery relations became more fluid, and (semi-)peripheries could then play a significant role in the birth and spread of new cultural institutions (Blanton *et al.* 1992: 419ff.; Edens 1993; Chase-Dunn and Hall 1997). The ability of some semi-peripheries to innovate sped their growth and enabled them to step up in the hierarchy of the system.

The demographic and military resources of regions close to the cores were nonetheless their best assets for gaining access to dominance. Groups originating in semi-peripheries at times took power in the cores. This could happen during phases of

¹⁵¹ From the fifth century onward, the Sumatran states substituted pine resin, benzoin, and camphor for incense, *bdellium*, and myrrh on the exchange networks. Semi-peripheries and cores also made use of technological innovations, a good example here being the manufacture of colored glass imitating semi-precious stones. A. and S. Sherratt (2001) have shed light on the importance of substitutions in the evolution of techniques and that of trade, as well as the overlapping roles of innovations, from field to field.

¹⁵² Sri Lanka should be added to this list, at certain times; to a lesser extent also the Swahili coast, in the field of shipbuilding. Developments in insular Asia and South Arabia were not only a response to the overall expansion of trade; these regions were also active in this expansion. Chase-Dunn and Hall (1997) correctly point out that there were various types of semi-peripheries and of semi-peripheral development.

¹⁵³ Examples from earlier time periods are the domestication of the horse and the Bactrian camel, and the invention of the war chariot, which resulted from interactions between urbanized regions and the steppes (Sherratt and Sherratt 2001). In contrast, peripheries developed little innovation; this fact was linked to the low number of people who were likely to invest, to the low level of capital available, and to a limited access to knowledge. Interactions between techniques have often been pointed out, for example between metallurgy, ceramic production, and the glass industry. Semi-peripheral merchant-towns were located along sea or land routes. Pliny (v.88) thus writes that Palmyra preserved its wealth and fortune by functioning as "an interstitial zone between the Roman and Parthian empires" (Parker 2002: 71).

expansion of the world-system; examples of this are the Kushans of Central Asia in India during the first century CE; the Arabs in western Asia and Egypt during the seventh century; the Seljukid Turks in western Asia during the eleventh century; the Jurchen in northern China during the twelfth century; the Mongols in China and in western Asia during the thirteenth century; the Turco-Afghans in northern India during the thirteenth century, the Osmanlis of Turkmen origin in Turkey during the fourteenth century; and the Turco-Mongols in Iran at the end of the fourteenth and the beginning of the fifteenth century. Such power could also be grasped during periods of recession, such as that involving the Fatimids from northern Africa in Egypt during the tenth century, or the Buyids of northern Iran in western Asia during the same century. These data underpin the well-known thesis of Ibn Khaldun, recently adopted by P. Turchin (2009), according to which the historical birth of empires arose from recurrent military opposition between sedentary populations and Bedouins or nomads, the latter bringing their warmonger vitality to the former, a thesis impossible to generalize. It is true, however, that the frontier between nomadic and sedentary populations played an important part in sociopolitical changes (Wink 2004: 79ff.).¹⁵⁴ In particular, herding and the exporting of horses were crucial assets for the arid zones of northern Asia, and groups originating in the steppes periodically established empires in India (Wink 2004: 119) and in northern China.

The weakening of its links with a core of the system could also foster the economic take-off of a semi-periphery when the latter, while trading with another center, was able to take on some of the activities of the first core: this partly explains the rise of Malacca after China's withdrawal (the progressive decline of Mojopahit, a competing power within the Southeast Asian periphery, was also a decisive factor in Malacca's success). More often, the opposite process occurred: the empires of Srīwijaya and later Mojopahit started to decline when they lost their privileged ties with China, during the thirteenth and fifteenth centuries, respectively (although Mojopahit did enjoy a period of expansion when the port of Quanzhou was devastated by civil wars, in 1327 [Reid 2006: 18]). The weakening of a semi-periphery could also result from the decline of its main periphery: Kilwa's activities declined during the fifteenth century when gold from Zimbabwe became rarer (here we have a good example of linkage between local trajectories and [trans]regional development).

Hierarchies between regions partly evolved within the temporal and spatial context of the system's pulsations, although, as pointed out, some areas sometimes appeared to be out of sync with the rest of the system. Shifts in centers of power, production, and accumulation were reflected by changes in trade routes, which competing powers tried to control. One observes oscillations between regions, reflecting processes of economic competition and politico-military power relations. Rome and its empire made up one core of the system at the beginning of the Christian era; the Byzantine Empire succeeded it during the system's second cycle; western Europe was only a periphery during the early medieval period, before becoming a semi-periphery during the thirteenth century and re-emerging as a dominant core at the end of the fifteenth century. In the western Indian

¹⁵⁴ This does not mean, however, that Wink is correct when he writes of sedentary societies being relatively immobile (2004: 80), and of a "relatively immobile political and social order of the Indian peasant world" (1997: 180).

Ocean, preeminence shifted alternately between the Persian Gulf (third–ninth century) and the Red Sea (second century BCE – second century CE, tenth–fourteenth century). It is not that these maritime routes were interchangeable: their purported “rivalry” resulted primarily from that of the political entities controlling these seas. Dominant states periodically either controlled these two maritime corridors (the Assyrian Empire during the seventh century BCE; Achaemenid Persia; Alexander’s Greece; and the Muslim caliphate) or tried to control them (Rome during the first century BCE and during the second century CE; and the Mongols during the thirteenth century). In Southeast Asia, the route leading toward China and spices ran through the northern Thai–Malay peninsula until the sixth century; it later shifted south of this peninsula to the southeast coast of Sumatra (seventh–thirteenth century), and Java (thirteenth–fourteenth century), before returning to the Malay peninsula at Malacca during the fifteenth century.

Hierarchies were thus hardly immune to change, either in space or in time, and the history of the world-system is not a constant repetition. Induced by technological and organizational innovations as well as processes of accumulation and demographic progress, the general evolution from one cycle to another paints a picture of increasing growth in production and trade, with more work invested, as well as greater hierarchization and specialization among and within the system’s various areas. The sum of all the interactions and singular local trajectories was a larger transregional division of labor over the centuries, along with ever-greater economic, political, and cultural integration.

Continuity and Change: The Expansion of the World-System

Successive systemic cycles appear to have been both similar and different. While changes did occur, they did not affect the nature of the system(s). In the Afro-Eurasian world, fundamental transformations can be seen only twice. The first occurred from 3500 to 2400 BCE in western Asia and Egypt and at the beginning of the second millennium BCE in China, when the state was born along with private means of accumulation, partially breaking with the former mode of accumulation based on kinship relations; this period was marked by the appearance of new ideologies and techniques of power, with the invention of writing, and the setting up of bureaucracies and armies. The second change occurred during the first half of the nineteenth century, during the Industrial Revolution¹⁵⁵ – also an ideological revolution – when the capitalist mode of accumulation rose to prominence for the first time, in a world-system that would henceforth link America, Africa, and Eurasia. The development of

¹⁵⁵ A. G. Frank, however, argues for a late turning point (around 1870) for the Industrial Revolution and the “Great Divergence” between Europe and the rest of the world (2015: 55). While for Frank, China’s decline occurred only after 1860 (2015: 55), Arrighi (2007) suggests 1840. It is probably true, also, that “steam power made its way rather slowly in and through manufacturing,” after the 1830s (Frank 2015: 22). Goldstone also writes: “the Industrial Revolution in England has been misunderstood largely because it has been misdated . . . The period from 1760 to 1830 was an era of pre-industrial growth . . . [and] lack of per-capita economic growth . . . Self-sustaining industrial growth would transform the world after 1830” (2002: 357, 355, 353, 354).

steam engines then transformed production, marking what we might call an “ecological break” into the use of non-renewable energy (coal, and later, oil and gas).

For the Indian Ocean, the sixteenth century was not the “break with the past” that is sometimes described. However, it was another decisive moment when a new ocean, the Atlantic, was joined to the Indian Ocean and the Mediterranean Sea – already linked since antiquity. During the second half of the sixteenth century, the Spaniards would add the Pacific to these oceans, after the voyage of Magellan’s fleet (1520–1522); Europe then emerged as the core of a new system, with western Africa and the Americas as peripheries.¹⁵⁶

Each period of growth created a new spatial division of labor, although each built upon the one preceding it: “The World is structured by memory [*le Monde est tendu de mémoire*].”¹⁵⁷ With the exception of the oscillations between rival regions, as mentioned above, commercial routes – at least the principal ones – tended to vary little over time. Secondary networks were more flexible, widening and becoming denser during phases of growth in the world-system and contracting during periods of regression, because these secondary routes tended to arise or disappear according to the resources on offer (raw materials, manufactured goods) and to those in demand, as well as in relation to geographic and political factors. Trade winds, for instance, were of great importance to ports located between two oceans. In these ports, the wait for favorable winds always fostered the spread of techniques and religions;¹⁵⁸ pivotal regions (for example, Southeast Asia, Oman, Yemen, and Sri Lanka) have retained their primordial roles in networks throughout history. The same holds true for ports situated at the mouths of rivers or harbors serving as final destinations for major land routes (for example, the mouths of the Tigris, the Euphrates, the Indus, the Ganges, the Yangtze, and the Gujarat, which abuts the roads leading to and from the Ganges valley) and for certain regions lying close to sources of essential raw materials, such as the gold of Zimbabwe and the spices of the Moluccas. Note that local situations can also be influential at the regional level. Thus the abandonment of the port of ‘Aydhāb around 1360, due to insecurity, led to a restructuring of exchange networks in the Red Sea and to a reassessment of relationships among regional powers.

In the far hinterland, particular zones could exert a marked influence, creating links or, conversely, barriers. For example, Central Asia, through which the Silk Roads passed, was essential to the commerce between China, India (by way of the Hindu Kush), and western Asia. The confederations and empires of the peoples of the steppes developed either hand in hand with, or in counterpoint to, those of China.¹⁵⁹ The great

¹⁵⁶ It is also during the sixteenth century that Russia conquered Siberia. The Americas, as Palat aptly notes, became “a new kind of periphery” through the development of plantation economies based on slave labor (2015: 25).

¹⁵⁷ Durand-Dastès 1990, quoted by Grataloup 2010: 21.

¹⁵⁸ In some ports located between two oceans, the wait for favorable winds transformed these places into “endless fairs”; the arrival of ships with the monsoon marked a peak in the trading activities. In the ports of insular Southeast Asia, “merchants [arrive] from the four corners of the Indian Ocean, ‘all dressed in the Turkish fashion’ and who stay ‘some six months in the said place to sell their goods.’ At the end of the six months, ‘along come others’” (F. Martin [1603], Braudel 2002, 11: 130).

¹⁵⁹ The development of the state in the steppes was triggered by increasing trade (Barfield 1989); in some cases, also, it corresponds to a process of militarization of nomad societies which is a response to a crisis

empires of China, northern India, Persia, the Abbasid caliphate, all – except the Song Empire – sought to control Central Asia, a strategy only profitable during periods of expansion in the system. Mention should also be made of the “steppe routes” lying farther to the north, and the importance of the routes between China and Burma, as well as the trans-Indian passage between the Ganges and Gujarat, and across the Deccan.

Land routes tended to complement sea routes rather than compete with them. They tended to develop in conjunction with sea passages, even when states concentrated their efforts on certain routes with the purpose of circumventing other states’ control over key regions. During the first century, the Romans succeeded in bypassing Arab merchant caravans by building up shipping in the Red Sea. Byzantium relied on a route crossing the steppes of Khazaria in order to avoid Persian competitors during the sixth century. But the flourishing of the Silk Roads and the route across the Mongol steppes during the thirteenth century did not weaken trade in the Indian Ocean (*contra* Bosworth 2000: 282).¹⁶⁰

Not only was there continuity in commercial routes, but there was also continuity in the types of products being exported. Over the course of centuries, several types of goods and products spurred both trade and population movements; such products included metals (precious or not); items of clothing; luxury goods for body adornment; aromatics; medicines and spices (linked to religion, health, and cooking); alcohol and narcotics; means of production (slaves, tools, and so forth); means of transport (for example, ships); instruments of war (weapons, horses, elephants), and food. There were also rare goods, such as sacred artifacts (statues, books, which Buddhist pilgrims used to seek and bring back from India and Sri Lanka); and means of entertainment and pleasure (musicians, dancers and acrobats, prostitutes). In all kingdoms, empires, and city-states, the arrival of luxury goods in a capital or city was proof of the greatness of the state and its superiority, as Pericles, Josephus, Ya’qūbī, and Ma Huan have clearly expressed with reference to Athens, the Roman Empire, the Abbasid Empire, and the Ming Empire, respectively (see above, and Bang 2009: 103). The supply of new products during periods of growth, however, was crucial to the evolution of the system: examples include the production of paper in the Abbasid Empire (using a technology borrowed from China); the development of porcelain and the tea culture during the Tang period in China; the use of the compass during the eleventh century; and the dissemination of firearms during the fifteenth century. Transfers of plants, animals, and diseases also played a crucial role.

This continuity was embedded within a general trend of expansion and intensification, itself linked to technological innovation and social developments brought about, in part, by economic constraints and sometimes – especially in the case of agriculture –

situation (Di Cosmo 1999a) (see above). “When China was stable and prosperous,” also notes W. McNeill (1993: 417), “the steppe peoples enjoyed their halcyon days, skimming surplus from it; when it could not produce enough surplus to satisfy them, they had to try to conquer it.”

¹⁶⁰ By contrast, disturbances along the Silk Roads during the fifth and sixth centuries shed light on the maritime expansion of the Sassanids, whose vessels probably sailed as far as China, a prelude to the Muslim voyages from Sirāf, under the Abbasid caliphate.

by demographic and ecological factors. This rhythm could intensify at certain times and in certain places. The free trade promoted by the Song in China from the tenth through the thirteenth century or by Europe during the sixteenth century gave rise to innovation and growth, as did competition among states, as we see again in Europe. Progress in agriculture was the cornerstone of urbanization, and the development of handicrafts or semi-industrial production fueled trade in internal as well as external markets. In manufacturing, one observes increasing diversification in products and, for some goods, a trend toward mass production. Progress in shipbuilding, especially during the twelfth and thirteenth centuries, reduced transportation times and influenced the types of products shipped. It allowed ever-larger loads of heavy and inexpensive materials (for example, raw materials, and agricultural products) to be carried. This point is important for our discussion of world-systems. According to Wallerstein, “the so-called [pre-modern] world-system” traded only in luxury goods, not staple items, and thus, in consequence, it could not have been organized by the “axial division of labor” that characterizes the modern world (1993: 293). This reasoning does not hold up under scrutiny, however. Agricultural products – and raw materials in general – were part of trade networks from the very beginnings of the system; evidence for this can be found in the *Periplus of the Erythraean Sea* and in recent archaeological excavations of the Egyptian port of Berenice. Evidence has surfaced from well before that time, during the third millennium BCE, showing tar, oils, and grain moving from Mesopotamia to Dilmun and Oman; wood and dairy products from India to Mesopotamia and Dilmun; and copper and hard stone from Oman to Mesopotamia. During the early Islamic period, wood was transported from East Africa to Sirāf (eighth–tenth century); ceramic ware from the Muslim world was used to carry dates; Chinese “Martaban” jars contained pickles (see the document sent by the sultan of Delhi ‘Alā ud-Dīn to the Ilkhānid ruler of Iran Rastud al-Dīn, mentioned above). The low cost of maritime transport along the Chinese coasts made it possible to carry rice, wheat, and metals, even before the Song dynasty. At all times, salt was carried over long distances (its trade is well attested in the Sahara during the last quarter of the first millennium, but it is surely even older). Whatever the relative importance may be between raw products and luxury goods, the very relevance of the distinction between these categories is debatable. The division between supposedly separate networks transporting prestige goods and weighty materials obscures the unity of the system.

We might also question Wallerstein’s notion that trade in luxury goods had no major systemic impact. Indeed, some authors have argued the opposite: that the circulation of luxury goods had structural implications due to the close connection of these goods to ruling elites, who wished to control them, as any change in the supply of these goods would have repercussions on political hierarchies (Schneider 1977; Peregrine 1991; Chase-Dunn and Hall 1997).

Significant gains in production and commerce were made possible through the use of money and the buildup of banking services. Thus we find that financial institutions arose from the very start of Islam. They built on the experiences of the Sassanid Persians, the Byzantine Empire, and from even further back: Persia, Mesopotamia, and Greece during the first millennium BCE. In the western Muslim world and in India, guilds and merchant associations acted as bankers, prime examples being the

Ayyāvoḷe of Deccan and the Manigrāmam of Tamil Nadu from the eighth to the fourteenth century (Abraham 1988); and the Egyptian or Yemeni *kārimī* from the twelfth to the fourteenth century (Vallet 2010b).¹⁶¹ Increasing monetization occurred over the centuries, although at different, sometimes opposing, rhythms from region to region (see Wicks 1992, for Southeast Asia). The creation of large political entities (for example, the Abbasid Empire, the Delhi Sultanate, and the various Chinese empires) naturally facilitated the spread of monetary systems over wide zones. Not only did money facilitate exchanges; it also made control over merchant activities and revenue collection easier. Administrative complexity and the use of money were clearly coupled albeit with some exceptions (for example, Cambodia, between the ninth and thirteenth centuries) (Wicks 1992).

Precious metals – in the form of merchandise and/or money – and their flow were important in the structuring of the world-system and its evolution. Precious or highly sought-after objects, which sometimes served as money (a standard of value, means of exchange or payment, or store of wealth), were spread along commercial routes.¹⁶² Cowries from the Maldives were used in most of Asia and Africa.¹⁶³ Silk, of course, was ubiquitous in caravan and maritime networks and served in various regions as a means of exchange and also as a unit of value (for example, Nanzhao during the ninth century, and Cambodia from the eighth to the thirteenth century).

Cores lacking precious or semi-precious metals sometimes overcame this shortfall by developing credit as a tool of economic expansion. Credit tools and means of payment facilitated and accelerated transactions. The growing use of paper money and bills of exchange in China starting in the ninth century was clearly linked to these two aspects. The same holds true for the notes of credit and payment orders found in the Muslim world as of the eighth century; these were instruments of finance that the northern Italian city-states would borrow in innovative ways.

From ancient times, market prices influenced the movement of goods. During the first century CE, the *Periplus* records that Egypt exported copper to Barygaza (Gujarat), and that this same port also exported copper (either of Egyptian origin or from production centers in northwestern India) to Apologos (near Basra). Marco Polo (1980: 306) describes a favorable gold-to-silver ratio that encouraged merchants to transport silver from Yunnan to Burma.

Commercial routes, however, were not the only networks that contributed to the birth and evolution of the world-system; other types of networks intersected with those of the merchants. Religion, for example, was essential to the history of the Indian Ocean and the China Sea. The development of Buddhism, Christianity, and later

¹⁶¹ Strictly speaking, though, the *kārimī* did not form a guild.

¹⁶² Currencies cannot be defined solely by their economic functions (see Bloch and Parry 1989; Aglietta *et al.* 1998; Breton 2002). As Wicks suggests, it is possible that in South Asia, money was originally conceived to fulfil fiscal and religious obligations and secondarily had commercial functions (1992: 312).

¹⁶³ Cowries were present in Punic tombs in northern Africa during the first millennium BCE, and in sub-Saharan Africa between the fifth and seventh centuries CE (Burkina Faso) (S. Magnavita, p.c.). They became more numerous in this region from the ninth century onward. Southeast Asia does not provide any evidence for an ancient use of cowries. However, ethnographic texts have signaled the use of cowries in New Guinea.

Islam, which saw the worshiper's relation to the divinity evolve toward a more and more individualized encounter, occurred within the context of increasingly private enterprise.¹⁶⁴ Buddhism and Islam spread along merchant routes, thus contributing to their growth. H. P. Ray (1994) has argued for a tie between Buddhism and the entrepreneurial spirit, and M. Rodinson (1966) and D. Lombard (1988: 11–18) have made similar cases for Islam, a religion which did not establish true barriers between religion and the business of trade. “The intellectual and matrimonial links of merchant groups with the religious class have been a permanent feature [in the history of Islam]” (Aubin 1988: 90). Tomé Pires relates that, in the ports of insular Southeast Asia, foreign merchants were accompanied by “Arab mullas,” “Islamic scholars, Sufi mystics, or preachers” (Hall 2001c: 226), who were often themselves acting as traders. Clearly tied to commerce, the expansion of Islam went hand in hand with the growth of the world-system and helped integrate its different parts. With some exaggeration, surely, D. Lombard (1990) has dubbed the fifteenth-century Indian Ocean “the Islamic sea.” The progress of Sufi movements that we see starting in the fourteenth century, “taking into account popular religiosity, facilitated the conversion to Islam of large sectors of conquered populations” in Europe, India, and Southeast Asia (Martinez-Gros 2009: 647). In addition, pilgrimages to shrines or to tombs of saints gave rise to merchant gatherings and even to fairs, notably in India, and of course at Mecca.

Other diasporas created fairly powerful networks over the centuries. Jewish communities based on the coast of Kerala from the time of the Romans were present in China from the eighth century and probably earlier. The Jewish networks based in Egypt and in Yemen are well attested for the eleventh and twelfth centuries, thanks to the Geniza documents of Cairo.¹⁶⁵ The role of merchant organizations such as the Tamil guilds have been mentioned above.¹⁶⁶ On a more modest scale, Nestorian Christians were also active throughout the Indian Ocean and along the routes of Central Asia. Along with trade networks, large political organizations also contributed to the expansion of the major religions: the Roman Empire, followed by the Byzantine

¹⁶⁴ As Goody has observed (1996: 120), “entrepreneurial activity is completely individualistic, but often occurs within a wider collectivity” (family or other community). Prior to the appearance of Christianity, the place of the individual was already asserted in the new schools of the Hellenistic period (the Cynics, the Epicureans, and the Stoics). L. Dumont (1983: 60) has put special emphasis on Calvinism; he has pointed out the important role played by Calvin's letter on usury (1545) in the development of the spirit of capitalism. In contrast with this Weberian perspective, R. H. Tawney (1926) notes that the same tendencies are in fact observable in Catholicism and Protestantism during the sixteenth and seventeenth centuries: it was capitalism which transformed Christianity. In fact, “more than an ethos associated with Protestantism, it was probably the secularization of society which was crucial in the rise of capitalism” (Maucourant 2004: 86) – a fact that W. Sombart had already pointed out. Already during the Renaissance, a movement of secularization had developed in relation to the emergence of the individual and to that of modern science. Moreover, we cannot state, as Weber did, that Asian modes of thought hampered modernization (Subrahmanyam 1996a: 24–30; Mielants 2007: 94).

¹⁶⁵ While it is true that some diasporas developed autonomy and specific strategies, their members often had their bases in cores or semi-peripheries and mainly traveled between these regions (this applied to the Jewish networks, between Egypt, Yemen, and India).

¹⁶⁶ While the guilds at times acted as a counter-power, very often they also developed a symbiotic relationship with the state.

and Carolingian empires led to the development of Christianity, and the Umayyad and Abbasid empires, and later the Delhi sultanate, led to the spread of Islam.

Cities served as points of articulation between commercial routes and religious networks. Increasing urbanization along with general demographic growth¹⁶⁷ and improvements in communication were integrally tied to the creation and expansion of the world-system. Although it originated in the cores of the system, urbanization also spread to the peripheries.¹⁶⁸ Engines of production and trade, cities were everywhere marked by social divisions, although these were more pronounced in cores than in peripheries. The development of networks resulted, moreover, in hierarchical relationships between metropolises and their satellite cities. “Clusters” of cities were thus formed, with the intensity of their interactions shaped by pulsations in the system. Over the ages, metropolises rose, fell, and replaced one another, with such changes accompanying a restructuring of networks and hierarchies, which could be political and economic in nature, or, at times, social or ideological as well: commercial centers moved between competing zones, as seen on the maps in this book. From one cycle to another, one notes a “push toward the coasts,” which Grataloup (2010: 41), following Corbin (1988), aptly expresses as “the desire for seashores.”¹⁶⁹

A distinguishing feature of cities throughout the world-system, from its very beginnings, has been their cosmopolitan nature, which increased as the network developed. It went hand in hand with religious tolerance at the level of political authorities and also, at certain moments, through the intermingling of religious networks. And although this may not have been the general rule, it was nevertheless a remarkable feature (take, for example, the shared business ventures conducted by Muslims and Jews in Egypt and Yemen during the eleventh century). In this regard, J. Aubin has justly remarked on “the indifference of the economic world to religious matters” (1988: 197). The transnational character of networks can be viewed as a counterpart to cosmopolitan cities (as shown, for example, by the family of Maḥmūd Gāwān during the fifteenth century).¹⁷⁰ S. D. Goitein’s description of Egypt during the twelfth–thirteenth century applies to other cities in other times: the pertinent division “was less in terms of religion and nationality than in terms of warrior leaders and merchant entrepreneurs” (1954a: 197). This “division,” however, should not be generalized too hastily.

¹⁶⁷ According to the estimates of C. McEvedy and R. Jones (1978: 343–344), the world population went from around 50 million inhabitants by 1000 BCE to 900 million in 1800. It doubled between the beginning of the Christian era and the early fifteenth century.

¹⁶⁸ Between 1000 BCE and 1800, the percentage of the world population living in towns with more than 10,000 inhabitants went from less than 1 percent to 4 or even 6 or 7 percent (Jones 1996a: 71).

¹⁶⁹ Beckwith’s statement (2011: 252, 255) according to which the sea routes “were politically and culturally unimportant” prior to the European arrival and therefore “barely mentioned” is astonishing. For Beckwith, politics and trade did not play a significant part in the coastal cities.

¹⁷⁰ Maḥmūd Gāwān, a scholar and a horse merchant whose family came from Jilān (Iran), was a minister in the Bahmani sultanate (India). His brother settled in Egypt, where their father lived; one of his sons traded with India, while two others who studied Koranic sciences resided in Mecca.

Capital Accumulation: The State, Religious Networks, and the Private Sector

Data show that private capital has existed alongside state capital since the second millennium BCE. In the genesis and evolution of the world-system, the entrepreneurial spirit has played a greater role than has long been thought. Frank and Gills have rightly stressed the existence of markets (with fluctuating prices) and of the accumulation of capital in ancient societies.¹⁷¹ Characteristics considered particular to the modern capitalist system – such as the setting of prices in free markets through supply and demand; the existence of a land market and a labor market; the monetization of transactions; the development of banking systems; loans to enterprises involved in a rational search for profit;¹⁷² an increasing production of goods for exports; and technological progress¹⁷³ – all were already present to varying degrees well before the sixteenth century. During some periods, the state was the major engine of accumulation; in others, the major engine consisted of private entrepreneurs (Chase-Dunn and Hall 1997: 212–213). For ancient Mesopotamia, Mauryan India (fourth–third century BCE), or the Roman world in its dealings with South Asia, recent research has questioned the presumed importance of the state in the development of commerce.¹⁷⁴ In any case it is clear that for the period after the seventh century, in the Abbasid caliphate (eighth and ninth centuries); South India (eighth–eleventh

¹⁷¹ Frank and Gills 1993a: 7, and chs. 3 and 5. See also Goody 2007: 192.

¹⁷² Capitalism, for Weber, is a progressive social construction leading to a rationalization of the pursuit of profit (Norel 2009b: 152). While Weber acknowledges the existence of an “ancient capitalism” (1998 [1906]), he insists on the fact that this capitalism, unlike medieval European capitalism, is structurally dependent on the political sphere and remains “irrational,” using techniques that limit its rise (cf. Bruhns 1998, 2004; Capogrossi 2004) (D. Rathbone [1991], however, offers a different assessment of ancient capitalism). While the ancient city, for Weber, was primarily a political and military center, the medieval (European) city shows the development of a rational behavior and the appearance of “a bourgeois entrepreneurial capitalism”; this process was fostered by various geographic, political, institutional, and legal factors: “medieval urban development was a factor that was absolutely determinant in the birth of modern capitalism.” For Weber, only Europe was progressively able to meet the six structural conditions allowing a rational search for profit and the emergence of capitalism; this occurred from the twelfth century on, with capitalism at last becoming dominant during the nineteenth century (see below). In contrast, Braudel has qualified the link fundamentally established by Weber and Sombart between rationality and capitalism: “there can be different versions of rationality within a single economy. There is the logic of free competition; and there is the logic of monopoly, speculation and power” (1988, 11: 576–577). A. and F. Bresson point out that to each kind of social and economic structure “corresponds a specific form of rationality” (2004: 113). Hintze (1991: 224) has already noted that, in the building of capitalism, profit seeking and rationalization of public and private enterprises were also accompanied with risk taking and speculation. Desire for domination also constrained rationality: “the enjoyment of power” means that “human beings are never . . . ‘economically rational’” (D. Kahneman, quoted by Guéry 2004: 158).

¹⁷³ In research conducted during the twentieth century, Eurocentrism usually prevailed. As P. Norel points out (2009b: 152), “most of the attributes supposedly decisive in the ‘Rise of the West’, whether it be rationality [Weber], entrepreneurial spirit [Schumpeter], technical inventiveness [Landes], political structure [Mann] or the application of science to technique [Goldstone], . . . have been integrated in the various conceptions of capitalism elaborated by historians” without considering their importance and their antiquity in non-European areas.

¹⁷⁴ See Veenhof 1997, 1999; Casson 1989: 32–36; Thapar 1997: 14; Ray 2003: 188–189, 192.

century); Fatimid and later Ayyūbid Egypt (tenth–thirteenth century); the sultanates of Bengal (fourteenth–fifteenth century) and Gujarat (fifteenth century), a form of (proto-)capitalism came to partially dominate production and commerce (Lombard 1971; Subrahmanyam 1990b; Gaborieau 1995a; Pomeranz 2000). As would later be the case in Europe, these entrepreneurs were at the same time producers, merchants, and financiers. Indeed, a general trend can be observed for “a complex mixture or articulations of modes (of accumulation) at all times in the development [of the world-system],” with phases of development and decline alternating in the private sector (Frank and Gills 1993a: 46). The political sector itself often developed an enterprising spirit and forms of “state (proto)capitalism,” by investing in manufacturing and in trade, with a search for profit, for example in the Abbasid caliphate, Song China,¹⁷⁵ Mamluk Egypt, and the Rasūlid sultanate of Yemen.¹⁷⁶ Commerce in precious metals, vital for the process of statebuilding, was obviously encouraged: thus, the Fatimid power benefited from the increasing exploitation of gold ore south of the Sahara, and contributed to it. It is significant that the trade of West African gold and of gold from Zimbabwe developed at practically the same time.

Within the core of a system, certain periods of weak political integration seem to have encouraged the development of production and commerce: competition among states or city-states stimulated the economy, and private entrepreneurs enjoyed greater liberty than those operating in stronger states. Edens (1993) has clearly demonstrated this phenomenon for the middle of the third millennium and the beginning of the second millennium BCE in western Asia. This point is essential for understanding the evolution of capitalism in Europe.

It is true, however, that in ancient times, the capitalist spirit rarely assumed a preeminent position, in contrast to Europe after the fifteenth century, when it permeated the structures of the state, thereby laying the groundwork for the birth of the capitalist world-system.¹⁷⁷ One notes movements of advance and reflux in the progress and articulation of markets for factors of production and of markets for goods, but the systems of markets that were formed tended to remain embryonic (Norel 2004: 155ff.).¹⁷⁸ The Chinese Song Empire, however, provides one of the first examples of a state and its society being transformed by burgeoning proto-capitalism, with the

¹⁷⁵ Braudel is certainly mistaken when he describes a Chinese state “that collapsed at infrequent intervals, and was always restored to a position much the same as before.” Due to the power of a Confucian state which was hostile toward the enrichment of merchants, China experienced a market economy without capitalism, in Braudel’s view (2002, II: 586). Situations much more complex and changing have been described in this book.

¹⁷⁶ As in Egypt, the involvement of the Rasūlid state in trade, sometimes in partnership with merchants such as al-Takrītī in 1320 and Ibn Jumay in 1390, was based on the institution of the *matjar*, “Office of the Sultanian trade.” That period also saw the emergence of the title “chief of the merchants.”

¹⁷⁷ According to Gills, however, “the entire Eurasian world economy/system of the 13th century was also perhaps ‘capitalist,’” and even that of “the 10th century” (1995: 139). As in Frank and Gills (1993c), here a confusion is introduced between *capitalistic practices*, ancient indeed, and the formation of a *capitalistic mode of production*, which occurred only during the modern period.

¹⁷⁸ P. Verley has also pointed out (1997a) that conglomerate markets “do not form a market economy; this latter notion implies a general and coherent system of markets linked with each other, regulated by a system of price.” See also Norel, 2009b: 203; Verley 2010.

creation of an urban bourgeoisie and internal markets.¹⁷⁹ This evolutionary path in China would, however, be halted by the foreign threat that weighed on the country and by internal contradictions in Chinese society.¹⁸⁰ Under the Ming, commerce would be more strictly controlled by the state, especially after 1433. Generally speaking, some kind of symbiosis between merchants and political elites was probably a necessary condition, allowing the geographical extension of exchanges to trigger the formation of national systems of markets, leading – eventually – to the establishment of a “capitalist system.”

Through its policy and the institutions it created, the state could restrain or promote production and exchanges. It often ensured conditions of economic development thanks to its institutional innovations; its investments (for example, in the fields of water control and transportation, notably in China);¹⁸¹ the treaties or contracts it secured with other states; or a policy of stimulation of the economy. As clearly shown by the European city-states of the Middle Ages and the Renaissance, and later by the northern states of this continent (the Netherlands, England) during the seventeenth century, a political context can promote innovations allowing decreases in production costs and transaction costs. New institutions and instruments thus ensured greater capital mobility and increasing production and commerce in Europe, with developments such as the letter of exchange; the acceptance of interest-bearing loans; improvements in accounting; better transmission of information; the appearance of commercial insurance and commercial law; and the creation of joint-stock companies (North 1991: 26–30). While these innovations often were not restricted to European countries, their conjunction and development induced a specific dynamic among competing European states. Generally speaking, the protection provided by the state was beneficial for trade, which could flourish only within a pacified and relatively predictable environment. The state might also play a role in the redistribution of wealth, and so contribute indirectly to production and social equilibrium. Conversely, political and social instability or violent competition between states negatively affected commerce, as did an excessive expansion of the state bureaucracy and the corruption that often went with it.

State policies vis-à-vis private long-distance commerce varied greatly, ranging from encouragement (under the Abbasids, the Egyptian Ayyūbids, and the Song for example) to direct and indirect restrictive measures, and on up to outright control. Control could take various forms. Under the Tang, the state supervised prices and monopolized certain goods; helped along by the monetization of the economy, however, internal market growth allowed a new class of state-supervised merchants to appear. During the 1420s, the Yemeni Rasūlids discouraged merchant activity due to high taxes and various

¹⁷⁹ As early as the Tang period, in fact, division of labor, markets of factors of production (land, labor, and capital), and external trade progressed in relation to internal markets of goods, according to a Smithian dynamic (Norel 2009b).

¹⁸⁰ Unlike the European states in the sixteenth century, moreover, Song China did not benefit from peripheral exploitable regions similar to the American continent and to Africa, although the development of southern China was crucial to the overall progress of the empire.

¹⁸¹ Generally speaking, the Chinese state took measures to ensure the grounds for an economic expansion – primarily in agriculture – in order to secure social order and political stability (Deng 1999; Wong 1999).

exactions. In Egypt, from 1429 on, the Burji Mamluks created a monopoly on the spice trade, set market prices, and overburdened merchants through taxation and severe restrictions on their businesses; although the spice trade would retain its importance, internal commerce would be affected by these measures.

The operating rationale on the part of states and private enterprises could be very different. It would be erroneous, however, to assume there was an automatic opposition between private and state modes of accumulation. There is evidence for competition between the state and private enterprise, but there were also instances of cooperation.¹⁸² For the Greek cities of antiquity, A. Bresson (2000: 259) has emphasized the parallel between “the wealth of the state and that of individuals.” Capitalist entrepreneurs oscillated between two strategies over the following centuries: investing in the state, or remaining outside politics to try and reduce the state’s role by disengaging from territoriality as far as possible.¹⁸³ Capitalist networks, however, could hardly do without the state: they required a stable world in order to develop their operations and/or a military force to defend their access to vital resources¹⁸⁴ and their property rights, and because the state played a role in market developments. In partial contradiction to each other, these strategies reflected different forms of logic for the accumulation of capital; they were set up concurrently or in a complementary fashion. On the other hand, the elites of the state had to choose between taking control of the economy – sometimes by instrumentalizing the great merchants, for example in fifteenth-century Mamluk Egypt – or encouraging success in the private sector and then taxing its activities. The ruling classes themselves often invested profitably in long-distance trade, as we see in the Roman Empire, Fatimid Egypt, and Song China. All situations ranging from symbiosis to instrumentalization are in evidence, whether this be instrumentalization of producer-merchants by the state, or of the state by merchants. In addition, neither the state nor the merchant class was a monolithic block; hierarchies and factional struggles made their confrontations more complex.

In large agricultural empires, princes relied upon merchant-bankers to convert wealth in the form of foodstuffs into the type of revenue that the state could use (Chaudhuri 1990: 256, 387; Bang 2009),¹⁸⁵ especially for imports such as precious metals; animals (horses, elephants, in much use in large armies); prestige goods; and sometimes for financial loans. During the tenth century, for example, the Jewish bankers Joseph b. Phineas and Aaron b. ’Amran lent money to the caliph and his

¹⁸² Note also that the ideologies stated did not necessarily accord with reality. “Political discourse was frequently hostile to merchants and trade,” notes H. J. Kim, following W. Scheidel, “but ironically markets and commercialism were [relatively] widespread in both [Chinese and Roman] empires” (*Bryn Mawr Classical Review* 2009.04.66).

¹⁸³ See Arrighi 1994: 82. In Europe, from the fifteenth century onward, Venice and Genoa illustrate these two strategies, respectively; the Dutch Republic attempted a synthesis of the two during the seventeenth century, giving preeminence to world financial networks and the development of a military power permitting control of long-distance routes by its fleet.

¹⁸⁴ In the modern world-system, the states play a crucial role by helping to build quasi-monopolies that benefit capitalist firms (Wallerstein 2006). This synergy can also be observed in more ancient periods.

¹⁸⁵ This has been already noted in western Asia during the sixth and fifth centuries BCE with the role played by the private business establishments, and even earlier, during the second millennium BCE (Van de Mieroop 2002).

viziers; during the fourteenth century, the *kārimī* merchants lent huge amounts of money to the sultans of Egypt and to emirs. Merchants, who provided the elites with merchandise as well as services, did not simply coexist alongside bureaucratic structures: rather, the two worlds intermingled. States often called upon merchants to serve in their administrations. During the Tang dynasty, traders were given the task of collecting taxes in salt. Likewise, in the Abbasid caliphate, some tax collectors were merchants. In Egypt and Iraq during the tenth and eleventh centuries, representatives of Jewish merchant families were established as both bankers and tax collectors. Also in the tenth century, the king of eastern Java used merchants – Javanese, but also Sinhalese, South Indian, or Burmese – to collect taxes. In China during the time of the Yuan, Muslim merchants held a virtual monopoly over tax collection. Moreover, the merchants involved in long-distance trade often acted as diplomats. To various degrees, these merchants, however, remained subject to their rulers' power.

Several authors have underscored this ambiguous nature of the relationships between political powers and merchants and their networks. While D. Lombard has noted that “we must conclude that merchants in Asia [and in Africa] were either kept out or kept themselves out of politics,”¹⁸⁶ there are, in fact, many examples revealing the opposite. Buddhist texts dated to the first millennium signal that in India, merchant bankers sat on royal councils (Basham 1967: 222). In eleventh-century Fatimid Egypt, the Tustārī brothers, who were bankers and traders in luxury goods from the Indian Ocean, each rose to the position of vizier. At the end of the fourteenth century, Burhān al-Dīn al-Maḥallī, “merchant of the [Mamluk] sultan” Barqūq, also served as a diplomat for this sultan. In China, under the southern Song, merchants played key roles in commercial centers and sometimes obtained official positions (Pu Shougeng, at Quanzhou, is one good example). A few years later, “traders from the ports of southern China encouraged the Mongols to undertake great maritime expeditions in the southern Seas and against Japan” (Lombard 1988a: 15). In India, during the twelfth, thirteenth, and fourteenth centuries, kings and great merchants were linked by financial interests (Jain 2001: 346, 357) – these links are clearly visible under ‘Alā ud-Dīn Khaljī (1296–1316), between the government of the Delhi sultanate and the great Multanī merchants. In South India, between the tenth and thirteenth centuries, a complementary relationship took form between merchant associations and the political Chola power.¹⁸⁷ Note that the Chola kingdom maintained links with Song China, where capitalistic practices were developing at this time.

¹⁸⁶ Lombard 1988b: 117. “In the Islamic countries where the structure of the state . . . was well developed,” also writes Aubin, “the great merchants remained on the margins of the ruling class . . . [This was also the case] in semi-autonomous emporia of the Indian Ocean: authority was in the hands of trustworthy men who usually did not belong to the merchant class” (1988b: 88–89). Writing of the fifteenth century, Aubin gives several examples: the city of Aden, where a freeman, Amir Marjān, ruled in the name of the Ṭāhirid sultan; Hormuz, where power was in the hands of a prince or of factions, “the merchants being unassociated with political power”; and Diu, in Gujarat, which was also ruled by a freed slave (1988b: 88–89). Aubin, however, mentions “condottieri-merchants,” “who became both viziers and military chiefs” (see also Aubin 1973: 145). Cf. Mielants 2007: 99.

¹⁸⁷ Abraham 1988; Karashima 2002. Moreover, S. Subrahmanyam argues for the appearance of a “mercantilist” ideology in the states of the Bay of Bengal from the fifteenth century onward (2005b: 65ff.), as well as in Malacca.

One observes the same alliance in the Mongol Empire, between the political power in place and the *ortaq* guilds, and to a lesser extent, in Rasūlid Yemen (Vallet 2010b). Merchants were valuable auxiliaries for the state, thanks to their knowledge of accounting practices; this gave them entry into the ruling political spheres (Subrahmanyam 1996b: 89). In India, M. Gaborieau remarks on “the lack of a dividing line between the merchant and the soldier-administrator.”¹⁸⁸ The al-Tibī family played the role of “kingmakers” in the Pāndya kingdom of South India at the end of the thirteenth century, with Taqī al-Dīn al-Tibī, a brother of the powerful merchant of Qays Jamāl al-Dīn al-Tibī, acting as vizier. At Cannanore, at the beginning of the sixteenth century, Mamalli “marked a decisive shift from a commercial activity to a political function” (Bouchon 1975: 182).¹⁸⁹

Rather than involving themselves in political governance, merchants often chose to exert influence on rulers. The evidence appears to be on the side of Aubin and Lombard and against Y. Lacoste, who writes that “in the Indies, in China, in the Arab world . . . merchants [were] permanently integrated into the aristocratic minority and so had no reason to wish to change the society.”¹⁹⁰ Whereas some merchants did try to take advantage of their alliances with political rulers, this advantageous situation implied huge risks: their power could have represented a threat to state authority. The death sentence pronounced against minister Maḥmūd Gāwān by the Bahmanid sultan in 1481 reveals the vulnerability of Asian merchants vis-à-vis political power. After making use of them, the fifteenth-century Egyptian state rid itself of its *kārimī* merchants. For Egypt and Yemen during the fourteenth and fifteenth centuries, one notes a “relatively rapid turnover of those families in service to rulers, a sign of these associations’ instability, and perhaps of diverging long-term interests between the political powers in place and traders” (Vallet 2006: 572).

Too much emphasis has perhaps been placed on the social fragility of Asian merchants during the so-called “pre-modern” period, in contrast to European merchants who were protected by property rights and the influence they exerted upon the states. As already noted, Asian rulers needed the great merchants. It is true, however, that unlike the European situation, there was neither “fusion of state and mercantile interests” nor “institutionalization” of the power of the merchant class in Asia and in Africa (Mielants 2007: 101–102).¹⁹¹ As Braudel has pointed out, “capitalism only triumphs when it becomes identified with the state, when it is the state” (1977: 64–65).

¹⁸⁸ Gaborieau 1995: 456. See also Bayly and Subrahmanyam 1990: 244. While there was a separation in the Indian states between political power based upon agrarian control and the economic sphere of the merchants, this separation has probably been overestimated (Subrahmanyam 1996a).

¹⁸⁹ The social ascent of the Māppiḷa would peak when Ali Rāja reigned (1545–1591); he was the founder of a Muslim dynasty at Cannanore.

¹⁹⁰ This situation contrasted with European reality. According to Y. Lacoste (1982: 270), this explains the fact that it is in Europe that capitalism was able to impose itself as a dominating system and opened the path to the Industrial Revolution.

¹⁹¹ While merchants, as in Europe, were appointed to eminent official posts here, in contrast to Europe, this social ascent did not lead to an institutionalization of power of the merchant class (on this issue, for the Muslim world, see Denoix 2000: 285; Mielants 2007: 141ff.). R. Palat also notes: “There was no concerted move to consolidate an alliance between governing and mercantile-financial elites in the large agrarian-commercial empires of Asia. [Asian] ‘capitalism’ never became embedded within the political system . . . There was no fusion between state and capital” (2015: 5, 29). Although trade centers in South India

The volatility of merchant-elites and their desire for independence – with some guilds achieving true autonomy – could pose challenges for local authorities, who had to choose between cajoling and controlling them.¹⁹² In fact, “ancient capitalism” developed partly within the context of transregional commercial networks such as those of the Sogdian, Jewish, Muslim, Banian, and later the Armenian diasporas. The figure of Abū al-‘Abbas al-Ḥiğazī, whose seven sons from seven different wives settled in various countries and acted as his agents, is a good example of how Muslim networks were built up and came to blanket the Indian Ocean during the fourteenth century.

Religious institutions, which were relatively autonomous centers of authority, were also places of capital accumulation that sometimes entered into conflict with the political authorities.¹⁹³ Moreover, religious networks intersected with merchant networks, providing the state with a means of political integration. This was true for the Buddhist and Brahmin centers in South and Southeast Asia. Rituals and religious ideology played a central role by legitimizing political power and helping to control labor.

Another setting for the development of capitalistic practices, one that was historically primordial, was that of the city-states and small merchant sultanates that flourished from the thirteenth century onward in India, Southeast Asia, and along the Swahili coast.¹⁹⁴ As seats of power, and as the result of social contracts between political elites and merchant-producers, these cities blossomed in the interstitial regions of empires, or in the semi-peripheries of the system. Occasionally, however, a more or less autonomous city-state developed within a central state of the system; examples include Hormuz in the fifteenth century, the “merchant-republic” of Basrur, and other cities along India’s west coast, also during the fifteenth century (Subrahmanyam 1995). Note that political fragmentation in India would never be

(*erivirapattinam*) were protected by guards, it is significant that the Asian cities incorporated within country-states usually were not supposed to have armed forces.

¹⁹² Ibn Battūta thus notes that the rulers of Kulam or Calicut welcomed the traders, but they also welcomed practices of extortion and of piracy organized by local rulers along the west coast of India (1982, III: 206, 213).

¹⁹³ Burma offers a good example of the contradictions between the development of religious collectivities and the interest of the state. Periodically, phases of “purification” went along with the confiscation, by the state, of the wealth accumulated by religious institutions. Between 843 and 845, the Chinese emperor also had the wealth of the Buddhist monasteries confiscated, and the Buddhist religion was banned.

¹⁹⁴ China, in contrast, had no city-state. For India, one can mention Honavur, Cannanore, and Calicut, during the fourteenth and fifteenth centuries. In Southeast Asia we have: Samudra-Pasai, from the late thirteenth to the fifteenth century; the cities of the northern Javanese coast, during the fourteenth and fifteenth centuries, which were subjected to Mojopahit, but in fact were more and more autonomous during the fifteenth century; Malacca, during the fifteenth century; and Aceh after 1511. Along the Swahili coast, the main city-states were Kilwa from the twelfth to the fifteenth century, and Mogadishu and Mombasa during the fourteenth and fifteenth centuries. The city-states of the Malay world, however, appeared much earlier than the thirteenth century, as did the cities of East Africa. One may also think of the cities of the oases located along the Silk Roads as early as the first millennium; the location of these cities, however, was less advantageous than that of the ocean ports, since they were constantly under the threat of nomad invasions; their development was also limited by the cost of caravan transportation. For the beginning of the Christian era, already, W. Scheidel (2009) notes the contrast between the absence of city councils and self-governing centers in China and the situation of the cities in the Roman Empire.

sufficient to allow for the rise of autonomous city-state cultures. In some cases, city-states were able to build empires of a sort: for example, Srīwijaya from the seventh century onward (Manguin 2000c), and earlier, the Phoenician and Greek city-states of the first millennium BCE. The latter are good examples of city-states where a type of merchant proto-capitalism flourished, based on investment in production aimed at export. In these cities and small sultanates, a great merchant could enjoy a degree of political power alongside his ruler, who was often “first among traders within his states.”¹⁹⁵ In contrast to what we see in medieval and modern Europe, however, African and Asian city-states did not form sustainable “merchant republics” capable of influencing nation-states, and their traders usually remained vulnerable vis-à-vis the political powers in place; even at Malacca, merchants were at the mercy of the sultan (Mielants 2007: 103).¹⁹⁶ The naval power of the coastal Asian city-states remained limited (Mielants 2007: 152), and in these cities we do not see the “[European] desire for expansion based on the wedding of profit and power,” of trade and war (Wong 2002: 455).¹⁹⁷

The essential origins of the modern capitalist system can be traced to the European city-states. Obvious examples are the Italian city-states – Pisa, Venice, Genoa, Florence, Milan . . . From the twelfth century onward, they took advantage of the absence of a strong Italian “country-state” to form a semi-periphery. Other cities likewise emerged in northern Europe, such as Bruges, Cologne, Lübeck, and the ports of the “Hanseatic League” (Braudel 1979, vol. III). A system of interrelated city-states thus took shape during the thirteenth century; this was the cradle of the specifically European rise of capitalism. Its conspicuous absence in China, the Muslim world, and India partially explains the “divergence” we see between Europe and the rest of the Ancient World (Mielants 2007: 32ff.).

Specialized in specific forms of production, long-distance commerce, and intermediary activities, city-states – *cités à l'état pur* as Braudel has aptly called them – were extremely efficient, owing in part to the alliance between the political power and the private sector (a characteristic that was more European than Asian or African, as pointed out above) and also owing to their dynamic momentum, which attracted capital and skilled labor. These city-states were vulnerable and tempting prey for territorial states. Thus, they were always careful to build up forms of defense, create alliance networks (one example is the relationship between Swahili cities and inland groups), and to take the best advantage possible of their geographic locations (as did Hormuz and the cities of the Straits of Malacca). Even

¹⁹⁵ According to a French traveler to Acèh during the seventeenth century (Lombard 1988a: 15).

¹⁹⁶ The Portuguese, however, compared the four harbor chiefs of Malacca to the consuls of European merchant cities (Subrahmanyam 2005: 59).

¹⁹⁷ Merchants, as a group, in China for example, “had no political significance,” and Smithian dynamics which went along with trade expansion in Asia and Africa must be distinguished from European capitalism, which was based largely upon a combination of monopoly and force (Wong 1999: 220, 221). Hintze (1991: 213, 271, 277) has already pointed out the structural relationship between capitalism, the modern state, and imperialism; connected to the private sector, the European modern state has fostered the enlargement and organization of markets and the emergence of capitalism in Europe – often through violence. A situation of rivalry and competition between capitalist entrepreneurs and states, associated with a constant desire for profit and expansion, led to an intensification and a rationalization of both private and public enterprises.

guilds and private merchants had recourse to men-at-arms; examples include the great Indian guilds of the fifth to the fourteenth century, the ships of India's west coast during the fourteenth century, and Chinese junks for the same time period. As for the princes of city-states who engaged in commerce, two viewpoints have been developed: these princes may have been merchants who prefigured capitalist entrepreneurs, or they may have acted as predators (see Morineau 1999: 116–144). Ibn Battūta provides numerous examples of flotillas owned by government officials. His descriptions reveal the close ties existing among commerce, political power, and also piracy, as illustrated in the case of the sultan of Honavur, Jamal al-Dīn (fourteenth century).

The Advent of the Modern Capitalist World-System and the Industrial Revolution

The history of the Indian Ocean up to the sixteenth century thus reveals the ways in which its various regions became progressively integrated into the Afro-Eurasian world-system, as seen in economic cycles synchronized with political, social, and ideological developments; evolving urbanization; the overall growth of commerce and production; and the simultaneous development of hierarchical relations among cores, semi-peripheries, and peripheries within an international division of labor. This early history also sheds light on the ensuing period – the emergence of the capitalist world-system – and may also provide some hints as to the possible futures of the system.

Whether or not the beginning of the sixteenth century was a true break in world history is still debated. The arrival of the Portuguese in the Indian Ocean occurred during an ascendant phase of a cycle, a phase that would continue throughout the sixteenth century. The appearance of the Portuguese there did not represent a rupture, but rather a temporary disturbance. Far too few in number, the Portuguese lacked the means to implement their intended maritime policy. Moreover, for China, the real break had already occurred earlier in 1433, when the Ming prohibited trade with China's southern seas. All the same, coming just after the discovery of America, the arrival of the Portuguese in the Indian Ocean signaled the creation of a new order and new systemic configurations.

The history of the Indian Ocean leads us to place the idea of a European invention of capitalism into perspective and to give Asia and Africa back their “stolen legacy” (Hobson 2004; Goody 2007; see also Wolf 1982).¹⁹⁸ Beyond thirteenth-century Italy, capitalism had its roots in the Afro-Eurasian world-system in which Europe began as a simple periphery. Braudel did not share Wallerstein's “fascination” with the sixteenth

¹⁹⁸ Despite the Eurocentrism of some arguments put forward in *Civilization and Capitalism* volumes I and II, Braudel finally acknowledges (2002, III: 486) that “everywhere from Egypt to Japan, we shall find genuine capitalists, wholesalers, the rentiers of trade, and their thousands of auxiliaries – commission agents, brokers, money changers and bankers. As for the techniques, possibilities or guarantees of exchange, any of these groups would stand comparison with its western equivalents.” Should the rejection of Eurocentrism lead us to ask, as Goody writes (2007: 211), after Frank (1998), “do we need the concept of capitalism?” Once again, we observe here a confusion between capitalistic practices and capitalist mode of production (see below).

century,¹⁹⁹ and Frank and Gills have opposed the idea that a qualitative change took place in the world-system of the sixteenth century. However, we should not confuse the existence of markets with a “market economy,” and capitalist practices with the formation of a dominant capitalist mode of production. It is during the sixteenth century that capitalism truly emerged, and became a distinctive feature of the new world-system formed around Europe from the end of the fifteenth century onward: “modern globalization was born during the sixteenth century” (Flynn and Giraldez 2008). Accompanied by new modes of consumption, production, and labor organization, this emergence was enhanced by the interrelationship between rising merchant capitalism – which fostered structural changes, in league with the states – and an agrarian revolution that was partially engendered by the internal logic of feudalism (Brenner 1985; cf. Norel 2009b). For Arrighi, however, “the really important transition that needs to be elucidated is not [the transition] from feudalism to capitalism, but [that] from scattered to concentrated capitalist power [while scattered capitalist power can long be found in the Afro-Eurasian world-system, concentrated capitalist power is a feature specific to Europe]” (1994: 11). As did Braudel and Arrighi before him, Mielants (2007) shows the significance of the formation of what he calls an “inter-city-state system” in Europe from the twelfth century onward (with interconnections between politically autonomous cities located outside or within country-states) and the increasing integration of Europe into the Afro-Eurasian world-system, fostering the emergence of capitalist practices. The interstitial growth of capitalism is in fact found in other regions of the world-system at various points in time. It was only in Europe, however, that capitalism could fully impose its rationale on “country-states” and thereby become the dominant mode of production in the world-system.²⁰⁰ state-building and developing capitalism here appear to be closely tied together. With regard to this phenomenon, G. Arrighi (1994) has adduced three supplementary causes:

- Competition among relatively weak centralized states for mobile capital resulted in the latter setting the terms (kings ruling country-states were forced to negotiate the levying

¹⁹⁹ See Braudel 1979, III: 44. Goody also denies the idea of a “qualitative leap” from the “early’ to the ‘modern’ [worlds]” (2007: 136). Prior to Wallerstein, Marx considered that the modern history of capital started during the sixteenth century; but at the same time he emphasized the significance of the Italian cities of the Middle Ages. According to Polanyi, also, progress in market relations characterized the period starting at the end of the fifteenth century. For Marx and Weber, capitalism only truly emerged during the nineteenth century, with the growth of wage labor and the use of machines on a large scale (Marx), and the implementation of “the rational organization of (formally) free labor” (Weber 1996: 497). It is difficult to accept Braudel’s opinion according to which “even throughout the formidable transformation [of the Industrial Revolution], capitalism remained essentially true to itself” (2002, III: 611).

²⁰⁰ G. Arrighi and B. J. Silver (2009: 240) note that “historical capitalism as a world system of accumulation became a ‘mode of production’ – that is, it internalized production costs – only in its third (British) stage of development.” However, this internalization can already be observed, to a certain extent, in the Netherlands during the seventeenth century. “The geographic expansion of trade, through the specific action of mercantile capital, appears to have been closely linked to the creation of the institutions of capitalism in [European] countries in a central position,” the transformations involved revealing a “Smithian dynamic of structural change.” In Europe, the state appears to have been “an essential component, allowing trade geographic expansion in order to lead to a self-regulating market” (P. Norel 2009b,c).

of taxes on their subjects with the nobility, the clergy, and the urban bourgeoisie, who were represented in parliaments: this led to recurrent financing difficulties, and the rulers were forced to borrow money from the merchant bankers of the city-states, who thus acquired a strong economic and ideological position). The system of relations existing among city-states and the very philosophy of these cities became models for emerging nation-states (see also Mielants 2007: 43, and below).²⁰¹

- Military competition among European states spurred technological and organizational advances that fostered the expansion of the modern world-system (this plurality of competing states first appeared in Italy and later “imposed itself at the European level”) (Boucheron 2009b: 56).²⁰² Europe’s bypassing of the three “central corridors” of the world-system (Central Asia, the Persian Gulf, and the Red Sea) led to the establishment of trans-Atlantic connections.
- The plundering (gold, silver, and land)²⁰³ of the Americas and the African slave trade laid the foundations for Europe’s capitalist takeoff. European states built what can now be considered a new world-system²⁰⁴ – including the Americas and parts of Africa²⁰⁵ – one that would eventually subsume the old system, following the Industrial Revolution of the nineteenth century. Henceforth, the world-system became coterminous with the entire world, with Europe, and later the United States, as its dominant centers.

²⁰¹ Mielants (2007: 103 n. 36) points out that Asia did not show the formation of nation-states arising from city-states developing the notion of citizenship. Moreover, in contrast with Asia, the European city-states benefited from the absence of both powerful empires and raids from nomads (Mielants 2007: 159). Although C. A. Bayly and S. Subrahmanyam (1990: 253) note “the commercialisation of the state and political power” in Asia and the close links between the political sphere and great merchants who “helped organize production,” “the works by Chaudhuri [1985], Lombard and Aubin [1988], Bentley [1993, 1996, 1998], Curtin [1998], Goitein [1999], Barendse [2002], and Mielants [2007], [lend credence] to the idea that trade was probably more competitive, links between the political/military power and the merchant class were more tenuous, and perhaps commercial practices and techniques were less opaque [in Asia] than in Europe. These are decisive points on the question of the eventual universality of European capitalism” (Norel 2009c).

²⁰² P. Boucheron (2009b: 56) rightly points out the “matrix value” of the Italian fifteenth century. The European context contrasts with the relative peace the Asian powers enjoyed, at least during the seventeenth century (Bayly 2004).

²⁰³ The looting of resources and exploitation of Asia would occur later. See also Frank 1998; Grataloup 2010: 135ff. In addition, the discovery of America helped Europe build up its identity as a region “superior to the *whole* of the world” (Hobson 2004: 311). As noted above, for Tang and Song China, territorial extension toward the south (into the Yangtze basin and Lingnan) had been “determinant by providing a large external space (to some extent comparable to the discovery of the Americas, for Europe, during the sixteenth century)” (Norel 2007). Flynn and Giraldez (2008), however, have shown that China also benefited from its indirect connection with America.

²⁰⁴ *Contra* Frank and Gills 2000: 7. This debate raises the question of the nature of the European states by the sixteenth century: were they qualitatively different from other states? And did the logic of the system change with the emergence of modern Europe? In fact, one can see the United Provinces during the seventeenth century as the first example of a capitalist nation-state in a core, prior to England (Arrighi and Silver 2001: 265). The Dutch, English, and French companies trading in the Indies, during the seventeenth and eighteenth centuries, clearly illustrate the association between state and capitalism.

²⁰⁵ From the sixteenth century onward, Inner Africa was positioned as hub between the two coexisting world-systems (see Coquery-Vidrovitch 1999: 190). In Asia also, to be able to achieve their goals, the Europeans resorted to violence within the framework of imperialistic practices.

Other authors have pointed to the instrumentalization of merchants by political powers; the strengthening of the state through trade (Schwartz 1994); the appearance of a new “form of governmental rationality” (Foucault 2004; Norel 2009b: 231ff.); and the role the state played in developing markets for goods and for factors. Political centralization favored by instrumentalized long-distance trade stimulated market integration, by freeing the movement of goods and factors (Epstein 2000b). P. Norel (2009b: 229) notes that

a pronounced synergy exists between statebuilding and market deepening: the state helps create the conditions for market development (Hudson, Epstein); at the same time expanding exchanges and the monetization of local economies (due to long-distance trade, among other things) undoubtedly bolster the state (Schwartz, Mann) . . . In addition, long-distance trade is a structuring factor for market institutions . . . The very power of the state is both a cause and effect of the creation of market institutions.

Thus a kind of triple synergy is at work in what Norel has called the “Smithian dynamic of structural change”: Smithian and Schumpeterian growth can progress only if the state acts positively to free markets for goods and for factors. North (1981) also points out the role of the state in setting up more formal property rights and factor markets, insofar as political and economic powers develop some kind of synergy.

The Industrial Revolution was preceded by and accompanied an agricultural revolution, marked by technological innovations²⁰⁶ and legal and institutional changes, along with the enclosure process (initiated during the fifteenth century) and a modification of the “Corn Laws” in England (1846). This revolution partly resulted from expanding long-distance trade, in which England would exert its control at precisely the time when Europe was increasing its integration within the Afro-Eurasian world-system (Mazoyer and Roudart 1998: 313ff.; Boserup 1998: 38; Norel 2009b). The majority of yeomen disappeared: they were either reduced to salaried employees in agriculture or forced to flee to the towns.²⁰⁷

Scholars such as Y. Lacoste have argued that by removing merchants and bankers from power, the feudal system which developed in Europe – and Japan – resulted in the “individualization of the bourgeoisie” as a revolutionary class, conferring upon it “its essential role in economic and social evolution.”²⁰⁸ The bourgeoisie’s takeover of power opened the way for the Industrial Revolution, coming at a time when all the conditions for major technological innovations were ripe in Europe. Lacoste’s thesis may turn out to be rather simplistic, however. It disregards or underestimates the changes taking

²⁰⁶ For example, abandonment of the fallowing of land and the introduction of new crops.

²⁰⁷ In addition, some of the peasants deprived of resources by the enclosures became home weavers under the putting-out system which developed in various European countries during the sixteenth and seventeenth centuries (this system, however, had existed as early as the thirteenth century).

²⁰⁸ Lacoste 1982: 269. According to Lacoste (and Marx), it is the unique character of the European feudal system that explains the creation of a revolutionary bourgeoisie, the triumph of its ideology, and the advent of capitalism as the dominant mode of production. Open to question, however, is Lacoste’s contention that “in a country without feudal structures, merchants did not constitute a bourgeoisie,” but were part of the ruling aristocracy (1982: 267, 270) (see above). Likewise refutable is Lacoste’s assertion – made in order to fit with Marx’s “Asian mode of production” – that there was no private ownership of land in Asia (for Tang, Song and Ming China, see Gernet 1999: 230, 275ff., 360).

place in Europe during the twelfth and thirteenth centuries and later, during the Renaissance (such as technical input from Asia and Egypt; the discovery of the Greek and Arab philosophers; legalistic and institutional changes; the emergence of corporations; the birth of universities; and protection afforded to private property). From the thirteenth century onward, Europe rediscovered the basic ideas and institutional innovations of the Greek and Latin city-states. During a debate in 1787, certain American federalists adduced “the Greek Amphictyonic Council and some of the Hellenistic federations” (Hansen 2000c: 613). After 1579, the Netherlands provided a more recent example of a federation. “Republicanism and federalism are major aspects of modern statehood which stem from city-state cultures and, before the late eighteenth century, they were almost exclusively found in city-state cultures” (Hansen 2000c: 616).

Scholars have long wondered why China or another Asian country did not follow a similar path, although the real question is “why Europe was able to escape the limitations of the ‘high-level equilibrium trap’ that Elvin (1973) has identified for China” (Arrighi 2007; Frank 2015: 53). Arrighi shows that the western world escaped from the high-level equilibrium trap partly through a novel combination of capitalism and imperialism (2005). However, the advantages Europeans enjoyed from their spoils of silver and gold from the Americas cannot alone account for their success (access to this silver, along with gold, enabled Europe to compensate for its commercial trade deficit with Asian states).²⁰⁹ The fact that, unlike Europe, the structure of Chinese production (in the textile industry for example) remained largely rural until the eighteenth century, certainly played a role in the non-emergence of a capitalist system, as did China’s limited wage labor (Norel 2005).²¹⁰ A shortage of available land also worked to China’s disadvantage: it prevented the spread of cotton cultivation and the development of a significant cotton industry (Elvin 1973).²¹¹ For Europe, by contrast, Pomeranz has pointed out the significance of American land: its exploitation made it possible for Europe to overcome its own land shortage, and it boosted European industrial production (thanks to exports of raw American cotton, for example). Plants new to the Europeans, such as the potato, were imported from America; guano was another import, allowing Europe to make its arable land more productive. In India, various factors in the organization of production also hampered the development of the interior market and limited both capital investments and innovations (Pomeranz 2000: 176). The existence of a cheap labor force, sometimes unfree, did not favor the intensification of production (Pomeranz 2000: 213).²¹² In addition, as already described, traders held limited control over the production process, in the textile

²⁰⁹ This inflow of precious metals constituted a growth driver for production and trade in the Afro-Eurasian area.

²¹⁰ R. Palat and I. Wallerstein also note the significance of rural artisanal production in South India, which they link to specific features of societies relying on intensive wet rice cultivation (1999: 21–41).

²¹¹ M. Elvin (1973: 301) also put forward the lack of wood and metals (copper, iron, silver), which made the cost of building machines too high for many farmers or artisans.

²¹² The extent of social inequalities reduced the number of economic agents likely to invest; globally, the percentage of wealth invested in productive activities was relatively low.

industry for example – unlike the European situation: in India, we do not observe a “proletarianization” of workers by merchants (Mielants 2007: 100).

By the end of the eighteenth century, part of Asia was experiencing a phase of relative recession;²¹³ demographic growth – notably triggered by the introduction of American plants such as the sweet potato (Flynn and Giraldez 2008) – induced economic, social, and environmental pressures; the overabundance of labor and scarcity of capital put a brake on investment and technological innovation. The situation in Europe was just the opposite, with a scarce and costly work force and much capital available for investment (Frank 1998: 301ff.). With the setting of low interest rates following the creation of the Bank of England, the financial situation worked in favor of production and innovation. Moreover, as Pomeranz (2000: 65) points out, the location and characteristics of its coal mines – by geographical chance – favored England, in contrast to China. In addition, England was able to use its naval power to support the extension of its markets (Pomeranz 2009b).

Moreover, and paradoxically, it is probably the large size and strength of Asian states that prevented them from evolving as Europe had done, thereby discouraging both initiative and capitalist accumulation (Wong 1997: 146).²¹⁴ At the same time, China’s form of government and its underlying ideology were radically different than those in

²¹³ According to some authors, a part of Asia even experienced a phase of decline during most of the eighteenth century: see A. G. Frank (1998: 267ff.; 2015: 106) for India, and K. Pomeranz and S. Topik (1999: 6–7) for Indonesia. In contrast, J. Goldstone states that Qing China experienced an increase in both land and labor productivity in agriculture (2002: 350), and K. Pomeranz (2000: 29, 39, 141) emphasizes the high level of consumption in China during the eighteenth century: this was taking place despite the fact that the population grew by 100 percent (see also Sugihara 2003; Hobson 2004). Other authors call into question the idea of an Asian decline, for the Ottoman Empire or India (Pearson 2003: 119) and for Southeast Asia after 1780 (Reid 1997). China, however, experienced an economic and political downturn at the end of the eighteenth century (Goldstone 2002: 352). In contrast, many historians suggest a period of global decline during the seventeenth century; population growth in the Ancient World witnessed a slowdown, partly connected to the cool period of the “Little Ice Age” which occurred between 1640 and 1705. An economic recession is noteworthy in the lower Yangtze and the coastal regions of China during the second half of the seventeenth century (Pomeranz 2009b: 127). Moreover, while “the white metal from America no longer arrived in Spain in large quantities during the period 1640–1650” (Braudel 1946: 20), the crisis which accompanied the fall of the Ming in China (1644) was not directly linked to a shortage in silver (von Glahn 1996: 140, 232, 240). A return to prosperity in Europe during the eighteenth century partly resulted from gold inflow from Minas Gerais (Brazil). According to Frank, Europe only took advantage of the weakness of the Asian cores in the eighteenth century, thus managing to acquire a dominant position, which led Wallerstein (1999a) to observe ironically that Frank “proves the European miracle.” Considering the existence of only one world-system in the eighteenth century, which is Frank’s view, we are led to ask ourselves why this B phase (phase of decline) that he describes led to “a general recession” in Asia and growth in Europe. In addition, as noted above, there was no sign of decline in China prior to the end of the eighteenth century, and Frank himself acknowledges that China did not experience decline before the 1860s (2015: 100). It thus seems necessary to consider the competition between two world-systems: the old Afro-Eurasian system and a new one centered on Europe (and then North America).

²¹⁴ According to Needham (2004: 18), the Chinese bureaucracy did not encourage competition and did not favor the development of a “modern science”; the state “wanted to preserve social stability rather than further economic gain”; this idea, however, must be qualified (Goody 2007: 137): the Song period, as previously noted, represented a phase of major development. Needham has also pointed out that the Chinese society “denied merchants the possibility of playing a significant role in state affairs, as bankers and managers” (1991: 329).

Europe. G. Deng (1999) has suggested that the “ternary structure” characteristic of the Chinese empires (except during the Song period) – with its combination of agricultural preeminence, free peasantry, and physiocratic government – tended to limit its merchants’ power (for the Confucians, the merchants’ enrichment was necessarily achieved at the expense of peasant welfare and government revenue). As previously noted, merchants in Asian cities, unlike those we observe in Europe, were unable to impose their ideology on the country-states. It is significant that while merchants in Europe exerted a growing influence on emerging nation-states, in China, the Ming state discouraged private long-distance trade (Mielants 2007: 69). If the advances of capitalism in Asia did not lead to an Industrial Revolution, this was not necessarily due to an insufficient evolution in techniques, but due rather to the fact that those with the ability to innovate lacked the strength in numbers required to promote decisive change. The lack of institutions guaranteeing merchants’ capital in Asia has often been pointed out. Asia did not experience an Industrial Revolution, but neither did it experience an ideological and social revolution such as those arising in England, the United States, and France during the seventeenth and eighteenth centuries.²¹⁵ The Confucian vision of the world could not conceive of promoting the virtues of market principles of supply and demand as a means of social control; political valorization of the search for profit never occurred in China (Wong 1997: 133, 138).²¹⁶ During the modern period, China did not develop either European-style banking institutions or joint-stock companies. The levy of taxes did not involve “the kinds of negotiations and decision making that raising new taxes did in Europe” (Wong 1997: 133), and the state was not forced to borrow money from merchants.

In Europe, conversely, “negotiating over taxation was at the base of the process creating representative governmental institutions. The political logic of constitutional government was intimately tied to the efforts of state makers to solve their fiscal problems” (Wong 1997: 130); it was also tied to the rise of towns and their bourgeoisies (see also Baechler 1971). The period following the twelfth century saw the establishment of parliaments in England, France, and Spain;²¹⁷ in 1464, the duke of Burgundy convened the first Dutch assembly in Bruges (later, the assembly met in Brussels),²¹⁸ and in 1579, after the victorious war against Spain, the Union of Utrecht created the republican institutions of the United Provinces, governed by the States General. In England, an “Act asserting rights and liberties” was promulgated in 1689 (the Bill

²¹⁵ The idea that mass education offers a structural basis for technological innovation, however, only gained ground during the twentieth century.

²¹⁶ For other parts of the world, barriers posed by religions have often been mentioned. While it is true that ancient India did not develop institutions aimed at a large dissemination of knowledge, researchers have probably overstated the conservative nature of the caste system (Mokyr 2002: 251). The rigidification of the Muslim world was not general after 1400, as has often been written: in the Ottoman Empire, it did not occur until the eighteenth century.

²¹⁷ The Cortes turned into permanent bodies, the Deputations, which became “true state government authorities” in the kingdom of Aragon during the fifteenth century (Menjot 2009: 129). The royal authority, however, was more effective in Castile and Portugal.

²¹⁸ Power relations prevailed between cities and the dukes of Burgundy, at times leading to armed conflicts (Genet 2009: 139).

of Rights); it established the preeminence of Parliament, shortly before the creation of the Bank of England in 1694. The Declaration of the Rights of Man and the Citizen adopted by the French National Constituent Assembly of 1789 “marks in a way the apotheosis of the individual” (Dumont 1983: 102).²¹⁹

In Europe, the Industrial Revolution was also preceded and accompanied by a scientific revolution that saw the birth of an experimental method in science.²²⁰ Some authors have argued, however, that this method played no significant role in the technological innovations of the Industrial Revolution of the eighteenth and nineteenth centuries (see McClellan and Dorn 1999: 292). Moreover, Europe alone cannot be credited for its developments (Goody 1996: 7): Renaissance Europe and the Age of Enlightenment benefited from transfers of ideas and techniques, particularly from China.²²¹ Europe, however, appropriated Asian techniques “through far-reaching changes and a complete reformulation, within the context of a developing abstract scientific approach” (Norel 2009c). The Age of Enlightenment was key: it brought together science and techniques, and welcomed the scientific method into technological pursuits (Mokyr 2002: 35).²²² There was indeed a link between the innovation of

²¹⁹ In addition, see the “Bill of Rights adopted by certain (American) States and particularly that of Virginia in 1776” (Dumont 1983: 93).

²²⁰ In contrast to Europe, China did not develop a true theoretical science. It did not apply mathematical hypotheses to nature – a new European approach during the seventeenth century – and the Greek deductive methods in geometry remained practically unknown to the Chinese (despite a translation of Euclid’s *Elements* into Chinese during the thirteenth century). Chinese thought did not develop a logic of proof. Needham sees in this “failure” of China to engage in experimental and mathematical science a reason why the Industrial Revolution did not happen there; he attributes this failure to the Daoist idea that human society should not interfere with the laws of nature: “Daoist modes of scientific inquiry emphasize reflection on the world of nature rather than manipulation of it. Experiment upon nature is shunned since it would entail unacceptable violation of an organic order” (Finlay 2000: 285).

²²¹ Thus, in the textile industry, which was central to the first phase of the Industrial Revolution, “technical devices similar to John Kay’s fly shuttle (1733) and Hargreaves’s spinning jenny (1764) were known in China between the 11th and 13th centuries, and the spinning machine had been transmitted to the Italian cities, via the Muslim world and Byzantium, during the 13th century” (Norel 2009b: 22). New Chinese inputs reached Europe via the Jesuits, who were present in China during the seventeenth and eighteenth centuries. Techniques such as the multi-row seeder, the Rotherham swing plow, the rotary fan winnowing machine, the Bessemer converter – known in China before the Christian era – the spinning machine, the concepts of “faith in human reason as the center of all things,” the idea of a natural order of things and of the importance of *laissez-faire* (*wu-wei*) would all play crucial roles in Europe during the eighteenth and nineteenth centuries (Hobson 2004: 194ff.). For his steam engine, Watt improved a machine from Wilkinson. “But Wilkinson’s invention was more or less identical” to a machine presented by the Chinese Wang Chen in a *Treatise on Agriculture* published in 1313 (Elvin 1973: 195–196; Hobson 2004: 208; Norel 2009b). Y. Citton (2007) also points out the part Chinese Neo-Confucianism played in “the formation of the notion of an immanent economic order and of liberal governmentality” and in the idea of “Science” as the source of all truth and wisdom. On the significance of Oriental knowledge and ideas, see also J. Clarke (1997) and J. Goody (2007).

²²² Science brought a social and ideological aspect to “the industrialization process” (Jacob 1997). J. Goldstone writes of “experimental programs . . . applied to industrial processes” (2008: 133). He notes the spread of engine-based scientific inquiry in England between 1650 and 1750: this did not occur on the continent (perhaps due to the preponderance there of a Cartesian current which neglected experimentation) (2002: 370). While the improvement of steam engines during the 1770s has rightly been considered as a crucial step, “the systematic exploitation of scientific knowledge and its application to production,” characteristic features of the Industrial Revolution, along with “the widespread deployment

the steam engine and discoveries relating to atmospheric pressure (Mokyr 2002: 44), and men such as James Watt were in contact with eminent scientists of the period (Goldstone 2008: 133). The diffusion of a “scientific culture” was encouraged by the creation of institutions such as the Royal Institution of Great Britain in 1799.²²³ The emergence of modern science and that of capitalism in Europe both imply processes of rationalization, albeit in different ways. This twofold emergence was also linked to the freedom that the city-states (Italy, northern Europe) and later the European country-states granted to the individual, including entrepreneurial freedom, which allowed individuals to make profits, and enjoy freedom of thought and freedom to experiment, both of the latter asserted with relation to political and religious powers.²²⁴ Market economy and individualism were truly “two sides of the same coin” (Aglietta and Orléan 2002: 49, 89); the individual appeared as both the “product of and the condition for the advent of modernity” (Schmitt 2009: 769).

With regard to the rise of a true “innovation culture” and the scientific and technical advances that went along with it, what Europe was experiencing was a new vision of history; the idea of progress emerged, supported by philosophers such as Descartes and Condorcet. During the Industrial Revolution, Europe was motivated by the concept – foreign to Chinese thought until the nineteenth century – that human progress is linear and limitless. Due to continuous progress in technological innovation and productivity gains, from around 1840 onward, accelerated growth in product per capita helped strengthen this belief in endless progress. European expansion was also inspired – another difference from China – by an imperialistic ideology which was a fundamental strategy of capitalism (as demonstrated by Venice as early as the thirteenth century, and later by the Iberian expansion during the fifteenth century) and which came to be seen as a “moral duty” during the eighteenth and nineteenth centuries (Hobson 2004: 308).

It would be incorrect, however, to suppose that East Asia, especially, made no progress after the sixteenth century. Sugihara (2003) writes of an “industrious revolution” for the developmental pathway this region followed;²²⁵ it was marked by

of steam engines in manufacturing and transportation,” would not occur until the nineteenth century; Goldstone dates the emerging process of self-reinforced and accelerated growth marking the true start of the Industrial Revolution to the 1830s (2002: 356). “Pomeranz (2009a: 360), however, clearly shows that this science of machines would not have led to sustained growth without a combination of factors: assets drawn from the Americas, the fact that Great Britain was fortunate enough to dispose of accessible coal mines . . .” (Norel 2009b).

²²³ Knowledge and an interest in science spread into all social classes, as the chemist James Keir notes in 1789: a “scientific mentality” asserts itself in all of society (Mokyr 2002: 36).

²²⁴ The emergence of rational thinking in ancient Greece within the framework of those city-states that developed democratic institutions has previously been noted. As was the case in these cities, some freedom of enterprise and thought prevailed in China during the Song period, with various limitations (in both cases, however, the burden of external threats was a factor inhibiting further development). Freedom was restricted, in Ming China by state power, based on a neo-Confucianist philosophy; in the Muslim world, by the religious power itself (although Islamic city-states did exist in East Africa, Southeast Asia, India, and Iran).

²²⁵ Including India in this movement, R. Palat also notes: “Ample surplus of labor meant that tendencies toward the development of labor-saving devices and even of precision tools were stunted, as the emphasis was on acquiring greater manual dexterity through a more thoroughgoing specialization of labor” (2015: 219).

significant growth in agriculture (in Japan in particular) and the flowering of labor-intensive and resource-saving industries (unlike Europe's pathway to development).²²⁶ These industries were mainly rural. Thanks to this "industrious revolution," adapted to local conditions for production factors, eastern Asia's share in the world's total national product progressed until 1820, before decreasing from 1820 to 1945.²²⁷ Both of these paths of development merged in Japan, and later in coastal China, from 1945 onward, leading to the recent "East Asian miracle" (Pomeranz 2001: 324ff.). This "industrious" production can be found elsewhere, notably in South India and Southeast Asia, where it was linked to high yields in wet rice cultivation (Sugihara 2005).

In a way, the upsurge of individualism accompanying the emergence of capitalism and market relationships in Europe and America marked the triumph of an "economy of things" (*économie des choses*) over what one might call a "people-based economy" (*économie des personnes*),²²⁸ and of the short term over the long term.²²⁹ The primacy given to people's relationships with objects in market relations leads to the isolation of individuals,²³⁰ and to a neglect of the most vital social interests.²³¹ Along with other factors, this can lead to ecological and human disasters in the not-too-distant future. In the capitalist system, "instead of the economy being embedded in social relations, social relations are embedded in the economic system" (Polanyi 1957a: 57; Wallerstein 1999c: 56). "The idea of a self-adjusting market," writes Polanyi, "could not exist for any length of time without annihilating the human and natural substance of society; it would have physically destroyed man and transformed his surroundings into a wilderness" (Polanyi 1957a: 3). From its inception, the

²²⁶ Bayly (2004) emphasizes the existence of other centers of "industrious revolution," especially in South Asia.

²²⁷ In part due to different geographical and sociopolitical conditions, the Smithian dynamic thus can lead to "two types of further development. The first one is labor intensive and does not seek much to use capital and energy, which are a priori too costly (Sugihara 2003): these are the Chinese and Japanese paths; by contrast, the second type is capital-intensive and requires a great deal of energy. While the first Smithian dynamic stimulates the land market and the capital market (Pomeranz), it is unable to develop the labor market. The second Smithian dynamic has the power to stimulate the land market and the capital market, in a classic way, and also helps create a labor market that is founded on the direct exploitation of home-based work or wage labor by a trader" (Norel 2009c).

²²⁸ Breton 2002; Dumont 1983: 253; Aglietta and Orléan 2002: 49ff. See also Mauss 1983: 271.

²²⁹ Bloch and Parry (1989) show the existence of two monetary spheres of exchange in pre-modern societies, each of them both distinct and articulated; one is "of short-term exchange," the domain of individual activity, trade, and profit; the other sphere, "of long-term exchanges," is linked to the community and its reproduction; here "transactions [are] concerned with the reproduction of the long-term social or cosmic order" (1989: 24). In triumphant capitalism, this second sphere fades: "the values of the short-term order have become elaborated into a theory of long-term reproduction" (1989: 29).

²³⁰ Aglietta and Orléan 2002: 38. K. Polanyi also writes that commercial relations – the commodification of labor, land, and money – leave the individual "robbed of the protective covering of cultural institutions" (1957a: 76). While it is true that trade in luxury goods has always triggered processes of hierarchization and therefore of separation, the relationship of the individual to goods in the capitalist world is a new phenomenon: its novelty is the manner in which this came about. Market relationships themselves are not new to the Industrial Revolution, however (see above). Aristotle had already perceived that "trade triggers an insidious subversion of the values of the city" (Latouche 2005: 59).

²³¹ Polanyi 1957a; Aglietta and Orléan 2002: 53.

capitalist world-system continued its path of ascent (with the crises of the first half of the twentieth century and of the 1970s representing only relatively short-lived phases of regression). The pace of economic growth in the system as well as the integration of its different parts accelerated even further after World War II. Today this system is in the middle of a financial phase that some authors analyze as going along with a hegemonic transition from the USA to China (Arrighi 2007). This transition, however, remains difficult to assess, due to a number of uncertainties.²³² Demographic and ecological constraints, existing now at both local and global levels, may soon mark the upper limits of growth in this system, for this particular phase, or even for the system as a whole, unless new technological (and ideological) advances in or adaptations to the system can be found. One 1970 study has already highlighted the obvious existence of limits to growth, not only due to the exhaustion of certain resources (especially fossil fuels),²³³ land and fresh water, but also due to pollution created by growth (Meadows *et al.* 1970). At the current (1970) rate of growth, write the report's authors, the world's ecosystem is bound for a brutal collapse. They recommend a passage from a state of growth to one of equilibrium, knowing that the longer we wait to break with a type of growth we cannot control and that is destructive for the environment, the less chance we will have of ever attaining equilibrium. Although the conclusions of this report struck many at the time as being overly pessimistic, today their accuracy is becoming more apparent. Demographic development is exceeding the bounds of what the Earth can handle. According to current projections, there will be between nine and eleven billion people on Earth by 2050. Within twenty years, an economic recession unlike any seen before may result from ongoing climate warming and the exhaustion of resources.²³⁴ "The period 2000–2050 will therefore be a chaotic one . . . The system as such is entering a period of transition to something else" (Wallerstein 2002: 22, 7). The pressing question for us now is this: "will the fall take place in totalitarianism and barbarity or will it . . . be channeled through humanism and democracy,"²³⁵ guided

²³² Curiously, in their description of possible scenarios for the passage to an "East-Asian" cycle of accumulation, Arrighi and Silver (2001) fail to take into account new phenomena such as the depletion of non-renewable resources and of some raw materials, and the global environmental crisis which has already started.

²³³ A heavy reliance on non-renewable energy (coal, oil, and gas) has characterized the world-system since the Industrial Revolution: this is a critical difference from previous world-systems. "Agrarian societies," writes E. Burke III, "always had a tendency to push their ecological limits" (2009b: 38). This is even more true in the case of "advanced technological societies" that have enjoyed exponential increases in per capita energy consumption. Sombart has already recognized this novelty and the destructive potential of capitalism, due to its aspiration to limitless growth "that takes no heed of natural limits" (1926: 421). Obviously, nuclear energy is not the solution, due to limited uranium resources, the unsolved waste-disposal problem, and the risks inherent in this type of energy.

²³⁴ See N. Stern, *Le Monde*, October 31, 2006, and OECD reports (*OECD Environmental Outlook to 2050*, 2011, OECD work on Climate Change 2013–2014). On the economic and social effects of global warming, see WGBU 2007; Weitzman 2012.

²³⁵ V. Cheynet, *La Décroissance*, 2004, 2.

by a new economic model? Here, echoing Wallerstein, I believe we must decide what kind of society we want to see develop in the new world-system that will evolve.

The clumsiest lever which helps to move the masses of facts that have now accumulated is better than none, for it makes us the masters of facts, not their slaves. This book will have served its purposes if it helps others to handle the materials as it has helped me.
(Hocart 1933: viii; quoted by Scubla 2002: 202)

BIBLIOGRAPHY

- ABE, Y., 1984, *Le riz et la riziculture à Madagascar: une étude sur le complexe rizicole d'Imerina*, Paris: CNRS.
- ABINAL, R. P. and MALZAC, R. P., 1970, *Dictionnaire malgache-français*, Paris: Editions Maritimes et d'Outre-Mer (1st edn. 1908).
- ABITBOL, M., 1981, "Juifs maghrébins et commerce transaharien du XI^e au XVII^e siècle," in *Le Sol, la Parole et l'Écrit: Mélanges offerts à Raymond Mauny*, Paris: Société Française d'Histoire d'Outre-Mer, pp. 561–577.
- ABRAHAM, M., 1988, *Two Medieval Merchant Guilds of South India (South Asian Studies 18)*, New Delhi: Manohar.
- ABRAMSON, M. S., 2007, *Ethnic Identity in Tang China*, Philadelphia: University of Pennsylvania Press.
- ABU-LUGHOD, J., 1989, *Before European Hegemony: The World System AD 1250–1350*, Oxford University Press.
- 1993, "Discontinuities and persistence: one world-system or a succession of systems?," in A. G. Frank and B. K. Gills (eds.), *The World System: Five Hundred Years or Five Thousand?*, London and New York: Routledge, pp. 278–291.
- ABUNGU, G. H. O., 1990, "Communities on the River Tana, Kenya: an archaeological study of relations between the delta and the river basin, AD 700–1890," Ph.D. dissertation, University of Cambridge.
- 1994, "Islam on the Kenya coast: an overview of Kenyan coastal sacred sites," in D. L. Carmichael, J. Hubert, B. Reeves, and A. Schanche (eds.), *Sacred Sites, Sacred Places*, London: Routledge, pp. 152–162.
- ABUNGU, G. H. O. and MUTORO, H. W., 1995, "Coast-interior settlements and social relations in the Kenya coastal hinterland," in T. Shaw, P. Sinclair, B. Andah, and A. Okpoko (eds.), *The Archaeology of Africa: Food, Metals and Towns*, London and New York: Routledge, pp. 694–704 (1st edn. 1993).
- ADAMCZYK, D., 2006, "Silver, markets, and states: the impact of Islamic trade on eastern Europe in the ninth through eleventh centuries," *World History Bulletin*, 22 (2), pp. 47–49.
- ADELAAR, K. A., 1989a, "Les langues austronésiennes et la place du Malagasy dans leur ensemble," *Archipel*, 38, pp. 25–52.
- 1989b, "Malay influence on Malagasy: linguistic and culture-historical implications," *Oceanic Linguistics*, 28 (1), pp. 1–46.
- 1996, "Malagasy culture-history: some linguistic evidence," in J. Reade (ed.), *The Indian Ocean in Antiquity*, London and New York: Kegan Paul, pp. 487–500.
- 2004, "The Austronesian languages of Asia and Madagascar: a historical perspective," in A. Adelaar and N. P. Himmelman (eds.), *The Austronesian Languages of Asia and Madagascar*, London: Routledge/Curzon, pp. 1–44.
- ADSHED, S. A. M., 1995, *China in World History*, Basingstoke: Macmillan (1st edn. 1988).
- 2004, *T'ang China: The Rise of the East in World History*, Basingstoke and New York: Palgrave Macmillan.
- AELST, A. VAN, 1995, "Majapahit *pilis*: the currency of a 'moneyless' society 1300–1700," *Bijdragen tot de Taal-, Land- en Volkenkunde*, 151 (3), pp. 357–393.

- AGIUS, D. A., 2002, "Classifying vessel-types in Ibn Baṭṭūṭa's *Rihla*," in D. Parkin and R. Barnes (eds.), *Ships and the Development of Maritime Technology in the Indian Ocean*, London and New York: Routledge/Curzon, pp. 174–208.
- AGLIETTA, M., 2009, "Monnaie et capitalisme," in P. Beaujard, L. Berger, and P. Norel (eds.), *Histoire globale, mondialisations et capitalisme*, Paris: Éditions La Découverte, pp. 261–296.
- AGLIETTA, M. and ORLÉAN, A., 1998a, "Introduction," in M. Aglietta and A. Orléan (eds.), *La monnaie souveraine*, Paris: O. Jacob, pp. 9–31.
- (eds.), 1998b, *La monnaie souveraine*, Paris: O. Jacob.
- 2002, *La monnaie entre violence et confiance*, Paris: O. Jacob.
- AHRWEILER, H., 1976, *Byzance: le pays et les territoires*, London: Variorum.
- AIGLE, D., 2005, *Le Fars sous la domination mongole: politique et fiscalité (XIIIe–XIVe siècles)*, Studia Iranica Cahier 31.
- ALAM, I., 2002, "Cotton technology in India down to the sixteenth century," in D. P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization*, vol. III, part 2, A. Rahman (ed.), *India's Interaction with China, Central and West Asia*, Delhi: Oxford University Press, pp. 445–463.
- ALAM, M. and SUBRAHMANYAM, S., 2007, *Indo-Persian Travels in the Age of Discoveries, 1400–1800*, Cambridge University Press.
- ALEXANDER, J., 2001, "Islam, archaeology and slavery in Africa," *World Archaeology*, 33 (1), pp. 44–60.
- ALGAZE, G., 2001, "The prehistory of imperialism: the case of Uruk Period Mesopotamia," in M. S. Rothman (ed.), *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, Sante Fe: School of American Research; Oxford: James Currey, pp. 27–83.
- ALLEN, J. de V., 1993, *Swahili Origins: Swahili Culture and the Shungwaya Phenomenon*, London: James Currey; Nairobi; E.A.E.P., Athens, OH: Ohio University Press.
- ALLIBERT, C., 1976, "Le manuscrit de Chingoni (Mayotte)," *ASEMI*, 7 (2–3) and (4), pp. 119–122 and 25–62.
- 1984, *Mayotte, plaque tournante et microcosme de l'océan Indien occidental*, Paris: Anthropos.
- 1988a, "Les contacts entre l'Arabie, le Golfe Persique, l'Afrique Orientale and Madagascar: Confrontation des documents écrits, des traditions orales and des données archéologiques récentes," *Travaux de la Maison de l'Orient*, 16, "L'Arabie et ses mers bordières," pp. 111–126.
- 1988b, "Une description turque de l'océan Indien au XVIIe siècle: l'océan Indien occidental dans le *Kitab-i-Babrij* de Piri Re'is," *Études Océan Indien*, 10, pp. 9–47.
- 1990, *Textes anciens sur la côte est de l'Afrique et l'Océan Indien occidental*, Paris: CEROI-INALCO.
- 1991, "Waqwaq: végétal, minéral ou humain?," *Études Océan Indien*, 12, pp. 171–189.
- 1992, "Le monde austronésien et la civilisation du bambou: une plume qui pèse lourd: l'oiseau Rokh des auteurs arabes," *Taloha*, 11, pp. 167–181.
- (ed.) 1995a, 2007, see Flacourt 1995, 2007.
- 1995b, "Les mouvements austronésiens vers l'Océan Indien occidental: la tradition arabico-malgache revisitée," in *L'étranger intime: mélanges offerts à Paul Ottino*, Université de la Réunion, Océan Editions, pp. 61–76.
- 1996, "Metallurgy and the part played by the Western Indian ocean at the beginning of the second millennium AD," Colloque de Lyon "Communautés maritimes de l'Océan Indien (4e siècle av. J.-C. – 14e siècle ap. J.-C.)," July 1996.
- 1998, Compte-rendu de M. Horton, *Shanga, the Archaeology of a Muslim Trading Community on the Coast of East Africa, 1996*, *Topoi. Orient-Occident*, 8 (1), pp. 477–486.
- 1999, "The archaeology of knowledge: Austronesian influences in the western Indian Ocean," in R. Blench and M. Spriggs (eds.), *Archaeology and Language III*, London and New York: Routledge, pp. 268–276.

- 2000, "Des cauris et des hommes: réflexion sur l'utilisation d'une monnaie-objet et ses itinéraires," in C. Allibert and N. Rajaonarimanana (eds.), *L'extraordinaire et le quotidien: variations anthropologiques. Hommage au professeur Pierre Vérin*, Paris: Karthala, pp. 57–79.
- 2001, "Le mot 'Komr' dans l'Océan Indien (avec une note sur Qanbalū)," *Études Océan Indien*, 31, "Mare Prasodum: d'une rive à l'autre," pp. 13–33.
- 2005, "L'île Madagascar décrite par Marco Polo est-elle bien Madagascar? Réévaluation des hypothèses," in J. L. Bacqué-Grammont, A. Pino, and S. Khoury (eds.), *D'un Orient l'autre. Actes des troisièmes journées de l'Orient*, Bordeaux, October 2–4, 2002, Paris and Louvain: Peeters, pp. 73–82.
- 2011a, "Réévaluation du site de Vohémar: ouverture à d'autres hypothèses," *Études Océan Indien*, 46–47, pp. 7–14.
- 2011b, "Réflexions autour de Vohémar," *Études Océan Indien*, 46–47, pp. 149–160.
- 2015, "L'archipel des Comores et son histoire ancienne: essai de mise en perspective des chroniques, de la tradition orale et des typologies de céramiques locales et d'importation," *Afriques*, 6, <http://afriques.revues.org>
- ALLIBERT, C., ARGANT, A., and ARGANT, J., 1983, "Le site de Bagamoyo (Mayotte)," *Études Océan Indien*, 2, pp. 5–40.
- 1989, "Le site archéologique de Dembeni (Mayotte), Archipel des Comores," *Études Océan Indien*, 11, pp. 61–172.
- ALLIBERT, C., LISZKOWSKY D., PICHARD, J.-C., and ISSOUF, S., 1993, *Dembeni 3. Campagne de fouilles de 1990*, Fondation pour l'étude de l'archéologie de Mayotte, Dossier no. 2.
- ALLIBERT, C. and VÉRIN, P., 1993a, "Linguistique, archéologie et l'exploration du passé malgache," in Ø. Dahl (ed.), *Language: A Doorway between Human Cultures. Tributes to Dr. Otto Chr. Dahl on His Ninetieth Birthday*, Oslo: Novus Forlag, pp. 29–38.
- 1993b, "Les Comores et Madagascar: le premier peuplement," *Archaeologia*, 290, pp. 64–77.
- 1996, "The early pre-Islamic history of the Comores islands: links with Madagascar and Africa," in J. Reade (ed.), *The Indian Ocean in Antiquity*, London and New York: Kegan Paul, pp. 461–470.
- ALLORGE, L., 2006, "Fleurs et fruits de baobabs (*Adansonia*, Malvaceae). À tous seigneurs, tout honneur," *Succulentes*, 4, pp. 1–10.
- ALPERS, E. A., 1975, *Ivory and Slaves: Changing Patterns of International Trade in East Central Africa to the Later Nineteenth Century*, Berkeley and Los Angeles: University of California Press.
- 2009, *East Africa and the Indian Ocean*, Princeton, NJ: Markus Wiener.
- 2014, *The Indian Ocean in World History*, Oxford University Press.
- 2017, "Africa and Africans in the making of early modern India," in P. Malekandathil (ed.), *The Indian Ocean in the Making of Early Modern India*, London and New York: Routledge, pp. 61–74.
- AMIGUES, F., 2011, "La céramique dorée de Valence trouvée à Vohémar," *Études Océan Indien*, 46–47, pp. 75–89.
- AMILHAT-SZARY, A.-L., 2004, "Les récits de Poggio Bracciolini et de Pero Tafur: présentation," in *Le voyage aux Indes de Nicolo de Conti*, Paris: Chandeigne, pp. 41–88.
- AMIN, S., 1981, *L'échange inégal et la loi de la valeur: la fin d'un débat*, avec une contribution de J. C. Saigal, suivie de quatre autres textes de S. Amin, Paris: Anthropos (1st edn. 1973).
- 1993, "The ancient world-systems versus the modern capitalist world system," in A. G. Frank and B. K. Gills (eds.), *The World System: Five Hundred Years or Five Thousand?*, London and New York: Routledge, pp. 247–277.
- AN, Z. S. and THOMPSON, L. G., 1998, "Paleoclimatic change of monsoonal China linked to global change," in J. Galloway and J. Melillo (eds.), *Asian Change in the Context of Global Climate Change*, Cambridge University Press, pp. 18–41.

- AN JIAYO, 1991, "The early glass of China," in R. H. Brill and J. H. Martin (eds.), *Scientific Research in Early Chinese Glass: Proceedings of the Archaeometry of Glass Sessions of the 1984 International Symposium on Glass, Beijing, September 7, 1984*, Corning, NY: Corning Museum of Glass, pp. 5–19.
- 1996, "Glass trade in Southeast Asia," in A. Srisuchat (ed.), *Ancient Trade and Cultural Contacts in Southeast Asia*, Bangkok: Office of the National Culture Commission, pp. 127–138.
- ANDAYA, L. Y., 1993, "Cultural state formation in Eastern Indonesia," in A. Reid (ed.), *Southeast Asia in the Early Modern Era*, Ithaca, NY, and London: Cornell University Press, pp. 23–41.
- 2001, "The search for the 'origins' of Melayu," *Journal of Southeast Asian Studies*, 32 (3), pp. 315–330.
- ANDERSON, E. N., 2005, "Lamb, rice, and hegemonic decline: the Mongol Empire in the fourteenth century," in C. Chase-Dunn and E. N. Anderson (eds.), *The Historical Evolution of World-Systems*, Riverside: University of California, Palgrave Macmillan, pp. 113–121.
- ANDERSON, R. Y., 1990, "Solar-cycle modulation of ENSO: a possible source of climatic change," in J. L. Betancourt and A. M. McKay (eds.), *Proceedings of the 6th Pacific Climate (PACCLIM) Workshop*, California Department of Water Resources Technical Report, 23, pp. 77–82.
- 1992, "Long-term changes in the frequency of occurrence of El Niño events," in H. F. Diaz and V. Markgraf (eds.), *El Niño: Historical and Paleoclimatic Aspects of the Southern Oscillation*, Cambridge University Press, pp. 193–200.
- ANHEIM, E., 2009, "Les sociétés de cour," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 691–708.
- APELLANIZ RUIZ DE GALARRETA, F. J., 2004, "Banquiers, diplomates et pouvoir sultanien: une affaire d'épices sous les Mamelouks circassiens," *Annales Islamologiques*, 38, pp. 285–304.
- 2009, *Pouvoir et finance en Méditerranée pré-moderne: le deuxième état mamelouk et le commerce des épices (1382–1517)*, Barcelona: Consejo Superior de Investigaciones Científicas.
- APPADURAI, A., 1986, "Introduction: commodities and the politics of value," in A. Appadurai (ed.), *The Social Life of Things: Commodities in Cultural Perspective*, Cambridge University Press, pp. 3–63.
- ARASARATNAM, S., 1986, *Merchants, Companies and Commerce on the Coromandel Coast, 1650–1740*, Delhi and New York: Oxford University Press.
- ARDANT DU PICQ, C. P. M., 1912a, "La division du temps chez les Tañala de l'Ikongo," *Bulletin de l'Académie Malgache*, 10, p. 264.
- 1912b, "Le samantsy, jeu d'échecs des Tanala de l'Ikongo," *Bulletin de l'Académie Malgache*, 10, pp. 267–268.
- ARDIKA, I. W., 1991, "Archaeological research in northeastern Bali, Indonesia," Ph.D. dissertation, Australian National University.
- ARNOUX, M., 2001, "Innovation technique et genèse de l'entreprise: quelques réflexions à partir de l'exemple de la métallurgie européenne (XIIIe–XVIe siècles)," *Histoire, économie et société*, 20 (4), pp. 447–454.
- 2009, "L'Europe de la 'Grande Transformation'," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 740–755.
- ARRIGHI, G., 1994, *The Long Twentieth Century: Money, Power and the Origins of Our Times*, London and New York: Verso.
- 1998, "Capitalism and the modern world-system : rethinking the nondebates of the 1970's," *Review*, 21 (1), pp. 113–129.
- 2005, "States, markets and capitalism, East and West," in M. Miller (ed.), *Worlds of Capitalism: Institutions, Economic performance, and Governance in the Era of Globalization*, London: Routledge.

- 2007, *Adam Smith in Beijing: Lineages of the Twenty-First Century*, London and New York: Verso.
- ARRIGHI, G. and SILVER, B. J., 2001, "Capitalism and world (dis)order," *Review of International Studies*, 27 (5), pp. 257–279.
- 2009, "Capitalisme et (dés)ordre mondial," in P. Beaujard, L. Berger, and P. Norel (eds.), *Histoire globale, mondialisations et capitalisme*, Paris: Éditions La Découverte, pp. 227–260.
- ASHTOR, E., 1956, "The Kārimī merchants," *Journal of the Royal Asiatic Society*, 88 (1–2), pp. 45–56.
- 1971, *Les métaux précieux et la balance des paiements du Proche-Orient à la Basse-Époque*, Paris: SEVPEN.
- ASHTOR, E., 1976, *A Social and Economic History of the Near East in the Middle Ages*, Berkeley, Los Angeles, and London: University of California Press.
- 1996, "Spice prices in the Near East in the fifteenth century," in M. N. Pearson (ed.), *Spices in the Indian Ocean World*, Aldershot: Variorum; Brookfield: Ashgate, pp. 69–84 (first published in *Journal of the Royal Asiatic Society*, 1, 1976, pp. 26–41).
- ATHENOR, C., 2010, "Essai d'analyse de quelques textiles de fouille provenant de Vohémar (Nord-Est de Madagascar)," in *Civilisations des mondes insulaires (Madagascar, îles du canal de Mozambique, Mascareignes, Polynésie, Guyanes). Mélanges en l'honneur du Professeur Claude Allibert*, Paris: Karthala, pp. 285–297.
- ATWELL, W. S., 2002, "Time, money and the weather: Ming China and the 'Great Depression' of the mid-fifteenth century," *Journal of Asian Studies*, 61 (11), pp. 83–113.
- AUBAILE-SALLENAVE, F., 1984, "L'agriculture musulmane aux premiers temps de la conquête: apports et emprunts, à propos de *Agricultural innovation in the early Islamic world* de Andrew M. Watson," *Journal d'Agriculture Tropicale et de Botanique Appliquée*, 31 (3–4), pp. 245–256.
- AUBIN, J., 1953, "Les princes d'Ormuz du XIII^e au X^e siècle," *Journal Asiatique*, 241, pp. 77–138.
- 1963, "Y a-t-il interruption du commerce par mer entre le Golfe Persique et l'Inde du XI^e au XIV^e siècles?," in L. Marques (ed.), *Océan Indien et Méditerranée, Sixième Colloque d'Histoire Maritime*, Paris: SEVPEN, pp. 165–173.
- 1973, "Le royaume d'Ormuz au début du XVI^e siècle," *Mare Luso-Indicum*, 2, pp. 77–179.
- 1988, "Marchands de Mer Rouge et du Golfe Persique au tournant des 15^e et 16^e siècles," in D. Lombard and J. Aubin (eds.), *Marchands et hommes d'affaires asiatiques dans l'océan Indien et la mer de Chine: 13^e–20^e siècles*, Paris: EHESS, pp. 83–90.
- AUNG-THWIN, M., 1998, *Myth and History in the Historiography of Early Burma*, Ohio University Press.
- 2005, *The Mists of Rāmañña: The Legend that Was Lower Burma*, Honolulu: University of Hawai'i Press.
- AUSTIN, P., MACKAY, A., PALAGUSHKINA, O., and LENG, M., 2007, "A high-resolution diatom-inferred palaeoconductivity and lake level record of the Aral Sea for the last 1600 yr," *Quaternary Research*, 67 (3), pp. 383–393.
- AVELOT, R., 1912, "Les grands mouvements de peuples en Afrique," *Bulletin de géographie historique et descriptive*, pp. 72–216.
- AXELSON, E., 1940, *South-East Africa, 1488–1530*, London and New York: Longmans Green (2nd edn. 1969).
- 1973, *Portuguese in South-East Africa 1488–1600*, Cape Town: Wits University Press.
- AYALON, D., 1956, *Gunpowder and Firearms in the Mamluk Kingdom: A Challenge to a Mediaeval Society*, London: Mitchell.
- AYMARD, M., 1997, "Préface," in F. Braudel, *Les ambitions de l'histoire*, ed. R. de Ayala and P. Braudel, Paris: De Fallois, pp. 1–8.
- AYUBI, N. N., 2008, *Over-Statting the Arab State: Politics and Society in the Middle East*, New York: I. B. Tauris (1st edn. 1995).

- BABINGER, F., 1992, *Mehmet the Conqueror and His Time*, ed. W. C. Hickman, Princeton University Press (1st edn. 1978).
- BACHARACH, J. L., 1983, "Monetary movements in medieval Egypt, 1171–1517," in J. F. Richards (ed.), *Precious Metals in the Later Medieval and Early Modern Worlds*, Durham, NC: Carolina Academic Press, pp. 159–181.
- BACUS, E. A., 2004, "The archaeology of the Philippine archipelago," in I. Glover and P. Bellwood (eds.), *Southeast Asia: From Prehistory to History*, Abingdon and New York: Routledge/Curzon, pp. 257–281.
- BADEL, P.-Y.: see Polo, M.
- BAECHLER, J., 1971, *Les origines du capitalisme*, Paris: Gallimard.
- BAINES, J. and YOFFEE, N., 1998, "Order, legitimacy and wealth in Ancient Egypt and Mesopotamia," in G. M. Feinman and J. Marcus (eds.), *Archaic States*, Santa Fe: School of American Research, pp. 199–260.
- BAKER, C., 2003, "Ayutthaya rising: from land or sea?," *Journal of Southeast Asian Studies*, 34 (1), pp. 41–62.
- BALFOUR-PAUL, J., 1997, *Indigo in the Arab World*, Richmond: Curzon Press.
- BALTER, M., 2010, "The tangled roots of agriculture," *Science*, 327 (5964), pp. 404–406.
- BANG, P. F., 2009, "Commanding and consuming the world: empire, tribute, and trade in Roman and Chinese history," in W. Scheidel (ed.), *Rome and China: Comparative Perspectives on Ancient World Empires*, Oxford University Press, pp. 100–120.
- BARBOSA, D., 1967 [1516], *The Book of Duarte Barbosa: An Account of the Countries Bordering on the Indian Ocean and their Inhabitants*, trans. M. L. Dames, 2 vols. Nendeln: Kraus Reprint (new edn., Delhi 1989).
- BARENDSE, R. J., 2000, "Trade and state in the Arabian Seas: a survey from the fifteenth to the eighteenth century," *Journal of World History*, 11 (2), pp. 173–225.
2002, *The Arabian Seas: The Indian Ocean World of the Seventeenth Century, Asia and the Pacific*, London: M. E. Sharpe.
- BARFIELD, T., 1989, *The Perilous Frontier: Nomadic Empires and China* (Studies in Social Discontinuity), Cambridge, MA: Blackwell.
- BARKEY, K., 2005, "A perspective on Ottoman decline," in J. Friedman and C. Chase-Dunn (eds.), *Hegemonic Declines: Present and Past*, Boulder, CO: Paradigm, pp. 135–152.
- BARNAVI, E., 1987, "L'Europe de la Renaissance," in P. Vidal-Nacquet (ed.), *Atlas historique: histoire de l'humanité de la préhistoire à nos jours*, Paris: Hachette, pp. 146–147.
- BARNES, R., 1998, "Indian trade textiles. Sources and transmission of designs," in *Cultures of the Indian Ocean*, Lisbon: Instituto Português de Museus, Comissão Nacional Para as Comemorações dos Descobrimentos Portugueses, pp. 230–242.
- BARRAU, J., 1965a, "Histoire et préhistoire horticoles de l'Océanie tropicale," *Journal de la Société des Océanistes*, 21 (21), pp. 55–78.
1965b, "L'humide et le sec: an essay on ethnobiological adaptation to contrastive environments in the Indo-Pacific area," *Journal of the Polynesian Society*, 74 (3), pp. 329–346.
- BARRETT JONES, A. M., 1984, *Early Tenth Century Java from the Inscriptions*, Leiden: Koninklijk Instituut voor Taal-, Land- en Volkenkunde.
- BASCHET, J., 2009, "Le Journal de bord de Christophe Colomb," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 582–587.
- BASHAM, A. L., 1967, *The Wonder that Was India*, 3rd edn., Oxford: Taplinger.
- BASU, H., 1993, "The Sidi and the cult of Bava Gor in Gujarat," *Journal of the Indian Anthropological Society*, 28, pp. 289–300.
- BATTISTINI, R. and VÉRIN, P., 1963, "Le site archéologique de Talaky," *Annales Malgaches*, 1, pp. 114–154.

- 1966, "Les transformations écologiques à Madagascar à l'époque protohistorique," *Bulletin de Madagascar*, 244, pp. 841–856.
- 1971, "Témoignages archéologiques sur la côte vezo de l'embouchure de l'Onilahy à la Baie des Assassins," *Taloha*, 4, pp. 51–63.
- BATTISTINI, R., VÉRIN, P., and RASON, R., 1963, "Le site archéologique de Talaky," *Annales malgaches*, 1, pp. 111–127.
- BAUSANI, A., 1971, *The Persians: From the Earliest Days to the Twentieth Century*, London: Elek Books.
- BAYLY, C. A., 1983, *Rulers, Townsmen, and Bazaars: North Indian Society in the Age of British Expansion, 1770–1870*, Cambridge University Press.
- 2004, *The Birth of the Modern World, 1780–1914*, Hoboken, NJ: Wiley-Blackwell.
- BAYLY, C. A. and SUBRAHMANYAM, S., 1990, "Portfolio capitalists and the political economy of early modern India," in S. Subrahmanyam (ed.), *Merchants, Markets, and the State in Early Modern India*, Delhi: Oxford University Press, pp. 242–265.
- BEACH, D., 1994, *The Shona and Their Neighbours*, Oxford: Blackwell.
- BEAUJARD, P., 1983, *Princes et paysans: les Tanala de l'Ikongo: un espace social du Sud-Est de Madagascar*, Paris: L'Harmattan.
- 1991, *Mythe et société à Madagascar (Tañala de l'Ikongo): le chasseur d'oiseaux et la princesse du ciel*, Preface by G. Condominas, Paris: L'Harmattan.
- 1991–1992, "Islamisés et systèmes royaux dans le Sud-Est de Madagascar: les exemples antemoro et tañala," *Omaly sy Anio, Hier et Aujourd'hui*, 33–36, "Pouvoirs et états dans l'histoire de Madagascar et du Sud-Ouest de l'Océan indien," pp. 235–286.
- 1992, "Le 'roi' et le devin: réflexions à partir de l'intronisation d'un chef politique anakara," *Études Océan Indien*, 15, "Le Scribe et la grande maison: études offertes au Professeur J. Dez," pp. 137–176.
- 1995, "Les rituels en riziculture chez les Tañala de l'Ikongo (Sud-Est de Madagascar): rituels, mythes et organisation sociale," in S. Evers and M. Spindler (eds.), *Cultures of Madagascar: Ebb and Flow of Influences. Civilisations de Madagascar: flux et reflux des influences*, Working Papers Series 2, Leiden: International Institute for Asian Studies, pp. 249–279.
- 1998a, *Dictionnaire Malgache–Français (dialecte tañala, Sud-Est de Madagascar) avec recherches étymologiques*, Paris: L'Harmattan.
- 1998b, *Le parler arabico-malgache du Sud-Est de Madagascar: recherches étymologiques*, Paris: L'Harmattan.
- 1999, "Les musulmans à Madagascar," *Lettre d'information du GDR 122 du CNRS "La transmission du savoir dans le monde musulman périphérique"*, no. 19, pp. 185–195.
- 2001, "La Fille Difficile malgache (Madagascar et Mayotte)," in V. Görög-Karady and C. Seydou (eds.), *La Fille Difficile: un conte-type africain*, Paris: CNRS, pp. 239–262.
- 2003, "Les arrivées austronésiennes à Madagascar: vagues ou continuum?," *Études Océan Indien*, 35–36, pp. 59–147.
- 2006, "Le pèlerinage septennal sur le tombeau de l'ancêtre des Anteoñy (Antemoro, Sud-Est de Madagascar)," in S. Blanchy, J.-A. Rakotoarisoa, P. Beaujard, and C. Radimilahy (eds.), *Les dieux au service du peuple: itinéraires religieux, médiation, syncrétisme à Madagascar*, Paris: Karthala, pp. 403–453.
- 2007a, "L'Afrique de l'Est, les Comores et Madagascar dans le système-monde eurasiatique et africain avant le 16^e siècle," in D. Nativel and F. Rajaonah (eds.), *L'Afrique et Madagascar*, Paris: Karthala, pp. 29–102.
- 2007b, "Les manuscrits arabico-malgaches (sorabe) du pays antemoro (Sud-Est de Madagascar)," in *Coran et talismans. Usages magiques et onirocritiques des écrits islamiques*, C. Hamès (ed.), Paris, Karthala, pp. 219–265.

- 2007c, "East Africa, the Comoros Islands and Madagascar before the sixteenth century: on a neglected part of the world-system," *Azania*, 42, "The Indian Ocean as a cultural community," pp. 15–35.
- 2009, "Un seul système-monde avant le 16^e siècle? L'océan Indien au cœur de l'intégration de l'hémisphère afro-eurasien," in P. Beaujard, L. Berger, and P. Norel (eds.), *Histoire globale, mondialisations et capitalisme*, Paris: Éditions La Découverte, pp. 82–148.
- 2010, "From three possible iron age world-systems to a single Afro-Eurasian world-system," *Journal of World History*, 21 (1), pp. 1–43.
- 2011a, "Evolutions and temporal delimitations of possible Bronze Age world-systems in western Asia and the Mediterranean," T. C. Wilkinson, S. Sherratt, and J. Bennet (eds.), *Interweaving Worlds: Systemic Interactions in Eurasia, 7th to 1st Millennia BCE* (Proceedings of the symposium "What Would a Bronze Age World System Look Like? World Systems Approaches to Europe and Western Asia 4th to 1st Millennia BCE," University of Sheffield, April 1–4, 2008), Oxford: Oxbow Books, pp. 7–26.
- 2011b, "The first migrants to Madagascar and their introduction of plants: linguistic and ethnological evidence," *Azania*, 46 (2), pp. 169–189.
- 2013, "Ancient world-systems and processes of domination, coevolution, and resistance. the example of the East African coast before the 17th century," *Actuel Marx*, 53, pp. 40–62.
- 2017, *Histoire et voyages des plantes cultivées à Madagascar avant le 16^e siècle*, Paris: Karthala.
- BEAUJARD, P. and TSABOTO, J., 1997, "Les parias antemoro: les Antevolo," in *L'esclavage à Madagascar: aspects historiques et résurgences contemporaines*, Actes du Colloque International sur l'Esclavage, Institut de Civilisations-Musée d'Art et d'Archéologie, Antananarivo, pp. 383–399.
- BECKWITH, C. I., 2011, *Empires of the Silk Road: A History of Central Eurasia from the Bronze Age to the Present*, Princeton University Press.
- BELLWOOD, P., CAMERON, J., VAN VIET, N., and VAN LIEM, B., 2007, "Ancient boats, boat timbers, and locked mortise-and-tenon joints from Bronze/Iron-Age northern Vietnam," *International Journal of Nautical Archaeology*, 36 (1), pp. 2–20.
- BELROSE-HUYGUES, V., 1982, "L'itinéraire de Frère Gaspar de San Bernardino: une visite portugaise à la côte ouest de Madagascar en 1606," *Taloha*, 8, pp. 39–87.
- 1983, "Structure et symbolique de l'espace royal en Imerina," in F. Raison-Jourde (ed.), *Les souverains de Madagascar: l'histoire royale et ses résurgences contemporaines*, Paris: Karthala, pp. 125–151.
- 1983–1984, "La Baie de Boina entre 1580 et 1640: une critique des sources anciennes et récentes," *Omalasy Anio (Hier et Aujourd'hui)*, 17–20, pp. 165–194.
- BENJAMIN, J., 2006, "'The world and Africa': world-systems theories and the erasure of East Africa from World History," *World History Bulletin*, 22 (1), pp. 20–27.
- BENTLEY, J. H., 1993, *Old World Encounters: Cross-Cultural Contacts and Exchanges in Pre-Modern Times*, Oxford University Press.
- 1996, "Cross-cultural interaction and periodization in world history," *American Historical Review*, 101 (3), pp. 749–770.
- 1998, "Hemispheric integration, 500–1500 CE," *Journal of World History*, 9 (2), pp. 237–254.
- BERGER, L., 2009, "Épilogue. Capitalisme et mondialisation: de l'autonomie des trajectoires locales à l'interdépendance systémique globale," in P. Beaujard, L. Berger, and P. Norel (eds.), *Histoire globale, mondialisations et capitalisme*, Paris: Éditions La Découverte, pp. 421–467.
- 2010, "Islamisation et constitution des élites africaines (VIII^e–XVII^e s.): note sur l'œuvre inachevée de Pierre-Philippe Rey," <http://blogs.histoireglobale.com/>
- BERGÈRE, M.-C., 1986, *L'âge d'or de la bourgeoisie chinoise, 1911–1937*, Paris: Flammarion.

- BERMAN, H., 1983, *Law and Revolution: The Formation of the Western Legal Tradition*, Cambridge, MA: Harvard University Press.
- BERNARD, V., HARDY-GUILBERT, C., ROUGEULLE, A., and SCHIETTECATTE, J., 2015, "Sharma et sa région," in A. Rougeulle (ed.), *Sharma: un entrepôt de transit médiéval sur la côte du Hadramawt (Yémen, c. 980–1180)*, Oxford: Archaeopress, pp. 447–466.
- BERNER, K. S., KOÇ, N., GODTSLIEBSEN, F., and DIVINE, D., 2011, "Holocene climate variability of the Norwegian Atlantic Current during high and low solar insolation forcing," *Paleoceanography*, 26, PA2220, doi:10.1029/2010PA002002.
- BERTHIER, H., 1933, *Notes et impressions sur les mœurs et coutumes du peuple malgache*, Antananarivo: Impr. Officielle.
- BERTRAND, R., 2007, "Rencontres impériales: l'histoire connectée et les relations euro-asiatiques," *Revue d'histoire moderne et contemporaine*, 54 (4bis), pp. 7–21.
- BIANQUIS, T., 2000, "Le monde musulman du IXe/XIIe siècle au XVe/Xe siècle," in J. C. Garcin et al. (eds.), *États, sociétés et cultures du monde musulman médiéval*, vol. 11, Paris: PUF, pp. 5–81.
- BIANQUIS, T. and GARCIN, J.-C., 2000, "De la notion de mégapole," in J.-C. Garcin (ed.), *Grandes villes méditerranéennes du monde musulman médiéval*, École Française de Rome, pp. 7–10.
- BIARDEAU, M., 1981, "Pancamukka, la divinité à cinq têtes dans l'Hindouisme," in *Dictionnaire des mythologies*, vol. 1, Paris: Flammarion, pp. 199–201.
- BIRABEN, J.-N., 1979, "Essai sur l'évolution du nombre des hommes," *Population*, 34 (1), pp. 13–25.
- 2004, "Histoire du peuplement et prévisions," in G. Caselli, J. Vallin, and G. Wunsch (eds.), *Démographie, analyse et synthèse*, vol. v, Paris: INED, pp. 9–32.
- BIRKELI, E., 1936, "Les Vazimba de la côte Ouest de Madagascar: notes d'ethnologie," *Mémoires de l'Académie Malgache*, fasc. XXII, Antananarivo: Pitot de la Beaujardière, pp. 7–67.
- BISSON, M. S., 2000, "Precolonial copper metallurgy: sociopolitical context," in J. O. Vogel (ed.), *Ancient African Metallurgy: The Sociocultural Context*, Walnut Creek, CA: Altamira, pp. 83–276.
- BLANCHY, S., 1997, "Note sur le rituel d'intronisation des souverains de Mayotte et l'ancien ordre politico-religieux," *Études Océan Indien*, 21, pp. 107–129.
- 2000, "Les darweshs aux Comores (île de Ngazidja): systèmes de valeurs et stratégies: de l'idéal islamique à la réalité sociale," in *L'extraordinaire et le quotidien: variations anthropologiques – hommage au professeur Pierre Verin*, Paris: Karthala, pp. 217–240.
- 2010, *Maisons des femmes, cités des hommes: filiation, âge et pouvoir à Ngazidja (Comores)*, Nanterre: Société d'Ethnologie.
- 2011, "Mythes et rites à Ngazidja, Comores: origines du peuplement et construction culturelle," in *Civilisations des mondes insulaires (Madagascar, îles du canal de Mozambique, Mascareignes, Polynésie, Guyanes): mélanges en l'honneur du Professeur Claude Allibert*, Paris: Karthala, pp. 211–239.
- BLANTON, R., FEINMAN, G., KOWALEWSKI, S., and PEREGRINE, P., 1996, "A dual processual theory for the evolution of Mesoamerican civilization," *Current Anthropology*, 37 (1), pp. 1–14.
- BLANTON, R., KOWALEWSKI, S., and FEINMAN, G., 1992, "The Mesoamerican world system," *Review*, 15 (3), pp. 419–426.
- BLAUT, J. M., 1993, *The Colonizer's Model of the World: Geographical Diffusionism and Eurocentric History*, New York: Guilford Press.
- 2000, *Eight Eurocentric Historians*, New York: Guilford Press.
- BLENCH, R., 2008, "The Austronesians in Madagascar and their interaction with the Bantu of the East african coast: surveying the linguistic evidence for domestic and translocated animals," *Studies in Philippine Languages and Cultures*, 18, pp. 18–43.
- 2009, "Bananas and plantains in Africa: re-interpreting the linguistic evidence," *Ethnobotany Research & Applications*, 7, pp. 363–380.

- BLOCH, M. and PARRY, J., 1989, "Introduction: money and the morality of exchange," in M. Bloch and J. Parry (eds.), *Money and the Morality of Exchange*, Cambridge University Press, pp. 1–32.
- BLOOM, J. M., 2001, *Paper Before Print: The History and Impact of Paper in the Islamic World*, New Haven, CT: Yale University Press.
- BLUST, R., 1972a, "Proto-Oceanic addenda with cognates in non-Oceanic Austronesian languages," *Working Papers in Linguistics*, 4 (1), pp. 1–41, Honolulu: Department of Linguistics, University of Hawai'i.
- 1972b, "Additions to 'Proto-Austronesian addenda' and 'Proto-Oceanic addenda with cognates in non-Oceanic Austronesian languages'," *Working Papers in Linguistics*, 4 (8), pp. 1–17, Honolulu, Department of Linguistics, University of Hawai'i.
- 1983–1984, "Austronesian Etymologies II," *Oceanic Linguistics*, 22–23, pp. 29–149.
- 2006, "The linguistic macrohistory of the Philippines: some speculations," in Hsiu-chuan Liao and C. R. Galvez Rubino (eds.), *Current Issues in Philippine Linguistics and Anthropology: Parangal kay Lawrence A. Reid*, Manila: The Linguistic Society of the Philippines and Summer Institute of Linguistics Philippines, pp. 31–68.
- BOGAERT, R., 1966, *Les origines antiques de la banque de dépôt*, Leiden: A. W. Sijthoff.
- BOITEAU, P., BOITEAU, M., and ALLORGE-BOITEAU, L., 1997, *Index des noms scientifiques avec leurs équivalents malgaches: Dictionnaire des noms malgaches de végétaux (extrait du Dictionnaire des noms malgaches de végétaux)*, Grenoble: C. Alzieu.
- 1999, *Dictionnaire des noms malgaches de végétaux*, 4 vols., Grenoble: C. Alzieu.
- BOIVIN, N., CROWTHER, A., HELM, R., and FULLER, D. Q., 2013, "East Africa and Madagascar in the Indian Ocean World," *Journal of World Prehistory*, 26, pp. 213–281.
- BOIVIN, N. and FULLER, D., 2009, "Shell middens, ships and seeds : exploring coastal subsistence maritime trade and the dispersal of domesticates in and around the ancient Arabian peninsula," *Journal of World Prehistory*, 22, pp. 113–180.
- BOKOVENKO, N. A., 2004, "Migrations of early nomads of the Eurasian steppe in a context of climatic changes," in E. M. Scott, A. Y. Alekseev, and G. Zaitseva (eds.), *Impact of the Environment on Human Migration in Eurasia*, Dordrecht, Boston, and London: Kluwer Academic, pp. 21–33.
- BOND, G., KROMER, B., BEER, J., MUSCHELER, R., EVANS, M. N., SHOWERS, W., HOFFMANN, S., LOTTI-BOND, R., HAJDAS, I., and BONANI, G., 2001, "Persistent solar influence on North Atlantic climate during the Holocene," *Science*, 294 (5549), pp. 2130–2136.
- BOND, G., SHOWERS, W., CHESEBY, M., LOTTI, R., ALMASI, P., DEMENOCAL, P., PRIORE, P., CULLEN, H., HAJDAS, I., and BONANI, G., 1997, "A pervasive millennial-scale cycle in North Atlantic Holocene and glacial climates," *Science*, 278 (5341), pp. 1257–1266.
- BOOTHROYD, N. and DÉTRIE, M., 1992, *Le voyage en Chine: anthologie des voyageurs occidentaux du Moyen-âge à la chute de l'empire chinois*, Paris: Robert Laffont.
- BOPEARACHCHI, O., 2002, "Archaeological evidence on shipping communities of Sri Lanka," in D. Parkin and R. Barnes (eds.), *Ships and the Development of Maritime Technology in the Indian Ocean*, London and New York: Routledge/Curzon, pp. 92–127.
- BORSCH, S. J., 2005, *The Black Death in Egypt and England*, Austin: University of Texas Press.
- BOSERUP, E., 1981, *Population and Technological Change: A Study of Long-Term Trends*, University of Chicago Press.
- 1998, *The Conditions of Agricultural Growth: The Economics of Agrarian Change under Population Pressure*, London: Earthscan Publications (1st edn. 1965).
- BOSMAN, W., 1705, *A New and Accurate Description of the Coast of Guinea, Divided into the Gold, the Slave, and the Ivory Coasts*, London: Printed for J. Knapton et al.

- BOSWORTH, A., 1995, "World cities and world economic cycles," in S. K. Sanderson (ed.), *Civilizations and World Systems: Studying World-Historical Change*, Walnut Creek, CA, London, and New Delhi: Altamira Press, pp. 206-227.
- 2000, "The evolution of the world-city system, 3000 BCE to AD 2000," in R. A. Denemark, J. Friedman, B. K. Gills, and G. Modelski (eds.), *World System History: The Social Science of Long-Term Change*, London and New York: Routledge, pp. 273-284.
- BOSWORTH, C. E., 1993, "Miṣr," in C. E. BOSWORTH *et al.* (eds.), *Encyclopédie de l'Islam*, vol. VII, Leiden: Brill; Paris: Maisonneuve and Larose, p. 148.
- 1998, "Sayābidja," in C. E. BOSWORTH *et al.* (eds.), *Encyclopédie de l'Islam*, vol. IX, Leiden: Brill, p. 102.
- BOUCHERON, P., 2009a and b, "Introduction. Les boucles du monde: contours du xve siècle," and "Les laboratoires politiques de l'Italie," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 9-30 and 53-73.
- BOUCHERON, P. and DELALANDE, N., 2013, *Pour une histoire-monde*, Paris: PUF.
- BOUCHERON, P. and LOISEAU, J., 2009, "L'archipel urbain: paysage des villes et ordre du monde," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 668-690.
- BOUCHON, G., 1975, *Mamale de Cananor: un adversaire de l'Inde portugaise (1507-1528)*, Geneva and Paris: Librairie Droz.
- 1988, "Un microcosme: Calicut au 16e siècle," in D. Lombard and J. Aubin (eds.), *Marchands et hommes d'affaires asiatiques dans l'océan Indien et la mer de Chine: 13e-20e siècles*, Paris: EHESS, pp. 49-57.
- 1999, "Trade in the Indian Ocean at the dawn of the sixteenth century," in S. Chaudhury and M. Morineau (eds.), *Merchants, Companies and Trade: Europe and Asia in the Early Modern Era*, Paris: Maison des Sciences de l'Homme, and Cambridge University Press, pp. 42-51.
- 2004, "Présentation," in *Le voyage aux Indes de Nicolò de Conti (1414-1439)*, Paris: Chandeigne, pp. 7-39.
- BOULÈGUE, J., 1987, *Le Grand Jolof (XIIIe-XVIe siècle)*, Paris: Karthala.
- 2013, *Les royaumes wolof dans l'espace sénégalais (XIIIe-XVIIIe siècle)*, Paris: Karthala.
- BOULNOIS, L., 2001, *La route de la soie: dieux, guerriers et marchands*, Geneva: Olizane.
- 2008, *Silk Road: Monks, Warriors and Merchants*, Hong Kong: Odyssey Books.
- BOURDILLON, M., 1976, *The Shona Peoples*, Gwelo: Mambo Press.
- BOYER, R., 2008, *Les Vikings: histoire, mythes, dictionnaire*, Paris: Robert Laffont.
- BRADY, T. A. Jr., 1991, "The rise of merchants empires, 1400-1700: a European counterpoint," in J. D. Tracy (ed.), *The Political Economy of Merchant Empires*, Cambridge University Press, pp. 117-160.
- BRAMOULLÉ, D., 2011, "Les Fatimides et la mer: du rêve mystique à l'empire du large," thèse de doctorat, Université de Paris 1 Panthéon-Sorbonne.
- BRAUDEL, F., 1946, "Monnaies et civilisations de l'or du Soudan à l'argent d'Amérique: un drame méditerranéen," *Annales-Économie, Sociétés, Civilisations*, 1, pp. 9-22.
- 1949, *La Méditerranée et le monde méditerranéen à l'époque de Philippe II*, Paris: Armand Colin.
- 1958, "Histoire et sciences sociales: la longue durée," *Annales-Économie, Sociétés, Civilisations*, 13 (4), pp. 725-753.
- 1977, *Afterthoughts on Material Civilization and Capitalism*, Baltimore: Johns Hopkins University Press.
- 1979, *Civilisation matérielle, économie et capitalisme, XVe-XVIIIe siècle*, vol. 1: *Les structures du quotidien*; vol. 11: *Les jeux de l'échange*; vol. 111: *Le temps du monde*, Paris: Armand Colin.
- 1981, 1982, 1984, *Civilization and Capitalism, Fifteenth-Eighteenth Century*, vol. 1: *The Structures of Everyday Life*; vol. 11: *The Wheels of Commerce*; vol. 111: *The Perspective of the World*, London: Collins (paperback edn. Phoenix Press, 2002).

- 1990, *La Méditerranée et le monde méditerranéen à l'époque de Philippe II*, Paris: Armand Colin, 2 vols., 9th edn. (1st edn. 1949).
- BRAUN, O., 1973, *Comercio internacional e imperialismo*, Buenos Aires: Siglo XXI.
- BRAY, F., 1994, *The Rice Economies: Technology and Development in Asian Societies*, Berkeley and Los Angeles: University of California Press.
- 1999, "Towards a critical history of non-Western technology," in T. Brook and G. Blue (eds.), *China and Historical Capitalism: Genealogies of Sinological Knowledge*, Cambridge University Press, pp. 158–209.
- BRENNER, R., 1985, "The agrarian roots of European capitalism," in T. H. Astor and C. H. E. Philpin (eds.), *The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe*, Cambridge University Press, pp. 213–327.
- BRESC, H. and GUICHARD, P., 1982, "Du modèle hégirien au royaume arabe" and "Le monde des Abbassides, la réussite de l'Islam," in R. Fossier (ed.), *Le Moyen-Âge*, vol. 1: *Les mondes nouveaux*, 350–950, Paris: Armand Colin, pp. 191–282.
- BRESSON, A., 2000, *La Cité marchande*, Pessac: Ausoniu.
- BRESSON, A. and BRESSON, F., 2004, "Max Weber, la comptabilité rationnelle et l'économie du monde gréco-romain," in H. Bruhns and J. Andreau (eds.), *Sociologie économique et économie de l'Antiquité. À propos de Max Weber*, *Cahiers du Centre de recherches historiques*, 34 (October), pp. 91–114.
- BRETON, S., 2002, "Présentation. Monnaie et économie des personnes," *L'Homme*, 162, "Questions de monnaie," pp. 13–26.
- BRONSON, R., 1977, "Exchange at the upstream and downstream ends: notes towards a functional model of the coastal states in Southeast Asia," in K. L. Hutterer (ed.), *Economic Exchange and Social Interaction in Southeast Asia: Perspectives from Prehistory, History and Ethnography*, Ann Arbor: University of Michigan Press, pp. 206–227.
- BROOK, T., 1998, *The Confusions of Pleasure: Commerce and Culture in Ming China*, Berkeley: University of California Press.
- BROOKE, J. L., 2014, *Climate Change and the Course of Global History: A Rough Journey*, Cambridge University Press.
- BROTTON, J., 2002, *The Renaissance Bazaar: From the Silk Road to Michelangelo*, Oxford University Press.
- BROWN, H., 1992, "Early Muslim coinage in East Africa: the evidence from Shanga," *Numismatic Chronicle*, 152, pp. 83–87.
- 1996, "Coins," in M. C. Horton (ed.), *Shanga: The Archaeology of a Muslim Trading Community on the Coast of East Africa*, London: British Institute in Eastern Africa, pp. 368–377.
- BROWN, N., 2001, *History and Climate Change: A Eurocentric Perspective*, London: New York: Routledge.
- BROWN, R. L., 1987, "A note on the recently discovered Ganesa image from Palembang, Sumatra," *Indonesia*, 43, pp. 95–100.
- BROWN, W. H., 1985, "History of Siyu: the development and decline of a Swahili town on the northern Kenya coast," Ph.D. dissertation, Indiana University.
- BROWNING, R., 1980, *The Byzantine Empire*, New York: Scribner.
- BRUHNS, H., 1998, "À propos de l'histoire ancienne et de l'économie politique chez Max Weber," introduction to M. Weber, *Économie et société dans l'Antiquité précédé de Les causes sociales du déclin de la civilisation antique*, Paris: La Découverte, pp. 9–59.
- 2004, "Max Weber, économie antique et science économique moderne," *Cahiers du Centre de Recherche Historique*, 34, pp. 31–45.
- BUCKLEY EBREY, P. (ed.), 1993, *Chinese Civilization: A Sourcebook*, New York: Free Press (1st edn. 1981).

- BÜNTGEN, U. *et al.*, 2011, "2500 years of European climate variability and human susceptibility," *Science*, 331 (4), pp. 578–582.
- BURBANK, J. and COOPER, F., 2010, *Empires in World History: Power and the Politics of Difference*, Princeton University Press.
- BURCKHARDT, J., 1860, *Die Kulture der Renaissance in Italien*, Basel: Schweighauerschen Verlagsbuchhandlung.
- BURGUIÈRE, A., 2006, *L'école des Annales: une histoire intellectuelle*, Paris: O. Jacob.
- BURKE III, E., 2009a, "Islam at the center: technological complexes and the roots of modernity," *Journal of World History*, 20 (2), pp. 165–186.
- 2009b and c, "The big story: human history, energy regimes, and the environment" and "The transformation of the Middle Eastern environment, 1500 BCE – 2000 CE," in E. Burke III and K. Pomeranz (eds.), *The Environment and World History*, Berkeley, Los Angeles, and London: University of California Press, pp. 33–53 and 81–117.
- BURKILL, I. H., 1966, *A Dictionary of the Economic Products of the Malay Peninsula*, 2nd edn., 2 vols., Kuala Lumpur, Malaysia: Ministry of Agriculture and Cooperatives (1st edn. 1935).
- BURNEY, D. A., 1987a, "Late Holocene vegetational change in central Madagascar," *Quaternary Research*, 28 (1), pp. 130–143.
- 1987b, "Late Quaternary stratigraphic charcoal records from Madagascar," *Quaternary Research*, 28 (2), pp. 274–280.
- 1987c, "Pre-settlement vegetation changes at Lake Tritrivakely, Madagascar," *Paleoecology of Africa*, 18, pp. 357–381.
- BURNEY, D. A. and MATSUMOTO, K., 1994, "Late Holocene environments at Lake Mitsinjo, northwestern Madagascar," *Holocene*, 4 (1), pp. 17–25.
- BURNEY, D. A., ROBINSON, G. S., BURNEY, L. P. 2003. "Spororhoneyla and the late Holocene extinctions in Madagascar," *Proceedings of the National Academy Sciences of the USA*, 100, p. 10800–10805.
- BURNEY, D. A., BURNEY, L. P., GODFREY, L. R., JUNGERS, W. L., GOODMAN, S. M., WRIGHT, H. T., and JULL, A. J. 2004. "A chronology for late prehistoric Madagascar," *Journal of Human Evolution*, 47 (1–2), pp. 25–63.
- BURROUGHS, W. J., 2001, *Climate Change in Prehistory: The End of the Reign of Chaos*, Cambridge, Cambridge University Press.
- BURTON-PAGE, J., 1971, "Habshī," in B. Lewis, V. L. Ménage, C. Pellat, and J. Schacht (eds.), *Encyclopédie de l'Islam, Nouvelle Édition*, vol. III, Leiden: Brill; Paris: Maisonneuve and Larose, p. 15.
- BUTZER, K. W., 1995, "Environmental change in the Near East and human impact on the land," in J. M. Sasson (ed.), *Civilizations of the Ancient Near East*, vols. I–II, Peabody, MA: Hendrickson Publishers, pp. 123–150.
- BUXTON, I and HUGHES, P. S., 2014, *The Science and Commerce of Whisky*, Cambridge: RSC Publishing.
- BYRES, T. J. and MUKHIA, H., 1985, *Feudalism and non-European societies*, London and Totowa: Frank Cass.
- CAHEN, C., 1970, "Le commerce musulman dans l'océan Indien au Moyen-Âge," in M. Mollat (ed.), *Sociétés et Compagnies de commerce en Orient et dans l'Océan Indien*, Paris: SEVPEN., pp. 179–189.
- 1983, *Orient et Occident au temps des Croisades*, Paris: Aubier.
- 1997, *L'Islam: des origines au début de l'empire ottoman*, Paris: Hachette Littératures (1st edn. 1968).
- CAILLÉ, A. and DUFOIX, S. (eds.), 2013, *Le tournant global des sciences humaines*, Paris: La Découverte.
- CALABRESE, J. A., 2000, "Metals, ideology, and power: the manufacture and control of materialized ideology in the area of the Limpopo-Shashe confluence, c. AD 900 to 1300," in M.

- Leslie and T. Maggs (eds.), *African Naissance: The Limpopo Valley 1000 Years Ago*, Cape Town: South African Archaeological Society, pp. 100–111.
- CALANCA, P., 2010, “Le système chinois,” *L'Histoire*, 355, pp. 36–41.
- CALLET, F., 1974, *Histoire des rois*, trans. from *Tantara ny andriana* by G. S. Chapus and E. Ratsimba, 3 vols., Antananarivo: Editions de la Librairie de Madagascar (1st edn. 1953).
- 1981, *Tantara ny Andriana eto Madagascar*, 2 vols., Antananarivo: Imprimerie Officielle (repr. of 2nd edn. 1908).
- CALMARD, J., 1995, “L’invasion mongole; la domination des Mongols et de leurs successeurs dans le monde irano-musulman,” in J. C. GARCIN *et al.* (eds.), *États, sociétés et cultures du monde musulman médiéval*, vol. 1, Paris: PUF, pp. 315–342.
- CAPDEPUY, V., 2010, “Entre Méditerranée et Mésopotamie: étude géohistorique d’un entre-deux plurimillénaire,” thèse de doctorat, Université Paris-Diderot.
- CAPOGROSSI, L., 2004, “‘Capitalisme’ antique et ‘capitalisme’ médiéval dans l’œuvre de Max Weber,” *Cahiers du Centre de Recherche Historique*, 34, pp. 21–30.
- CAPREDON, M., 2011, “Histoire biologique d’une population du Sud-Est malgache: les Antemoro,” thèse de doctorat, Université de La Réunion.
- CAPREDON, M., BRUCATO, N., TONASSO, L., CHOESMEL-CADAMURO, V., RICAUT, F.-X., RAZAFINDRAZAKA, H., RAKOTONDRABE, A. B., RATOLOJANAHARY, M. A., RANDRIAMAROLAZA, L.-P., CHAMPION, B., and DUGOUJON, J.-M., 2013, “Tracing Arab-Islamic inheritance in Madagascar: study of the Y-chromosome and mitochondrial DNA in the Antemoro,” *PLoS ONE*, 8:e80932.
- CARROUÉ, L., COLLET, D., and RUIZ, C., 2008, *Les Amériques*, Paris: Bréal.
- CARSWELL, J., 1977, “China and Islam in the Maldivé islands,” *Transactions of the Oriental Ceramic Society*, 41, pp. 121–198.
- 1996, “The excavation of Mantai,” in J. Reade (ed.), *The Indian Ocean in Antiquity*, London and New York: Kegan Paul, pp. 501–516.
- 1998, “Šinī,” in C. E. Bosworth, E. van Donzel, W. P. Heinrichs, and G. Lecomte (eds.), *Encyclopédie de l’Islam*, 2nd edn., vol. 1X, Leiden: E. J. Brill, pp. 672–673.
- 2013, “Introduction,” in J. Carswell, S. Deraniyagala, and A. Graham (eds.), *Mantai, City by the sea*, Aichwald: Linden Soft Verlag, pp. 12–15.
- CARVALHO, V., M. A., 2008, “Madagascar et la carreira da India,” Thèse de doctorat, Paris: EPHE.
- CASALE, G., 2007, “The ethnic composition of Ottoman ship crews and the ‘Rumy challenge’ to Portuguese identity,” *Medieval Encounters*, 13, pp. 122–144.
- CASPARIS, J. G. DE, 1956, *Prasasti Indonesia II: Selected Inscriptions from the 7th to the Ninth Century AD*, Bandung: Masa Baru.
- 1988, “Some notes on words of ‘Middle-Indian’ origin in Indonesian languages (especially Old Javanese),” in L. S. Maria, F. Soenoto Rivai, and A. Sorrentino (eds.), *Papers from the III European Colloquium on Malay and Indonesian Studies*, Naples, Istituto Universitario Orientale, Dipartimento di Studi Asiatici, Series Minor 30, pp. 51–63.
- 2000, “The expansion of Buddhism into Southeast Asia (mainly before AD 1000),” in V. Elisseeff (ed.), *The Silk Roads, Highways of Culture and Commerce*, UNESCO Publication, New York and Oxford: Berghahn Books, pp. 49–68.
- CASSON, L. (ed.), 1989, *Periplus Maris Erythraei*, Princeton University Press.
- CATAT, L., 1896, *Voyage à Madagascar*, Paris: Hachette.
- CESSI, R., 1957, “Mercanti Veneziani nella ‘India’ nel secolo XVI,” in *Studi in onore di Armando Sapori*, Milan: Istituto editoriale cisalpino, pp. 1098–1105.
- CHAFFEE, J., 2006, “Diasporic identities in the historical development of the maritime Muslim communities of Song-Yuan China,” *Journal of the Economic and Social History of the Orient*, 49 (4), “Maritime Diasporas in the Indian Ocean and East and Southeast Asia (960–1775),” pp. 395–420.

- CHAKRAVARTI, R., 1999, "Early medieval Bengal and the trade in horses: a note," *Journal of the Economic and Social History of the Orient*, 34 (3), pp. 159–182.
- 2001a and b, "Introduction" and "Monarchs, merchants, and a Matha in Northern Konkan (c. AD 900–1053)," in R. Chakravarti (ed.), *Trade in Early India* (Oxford in India Readings: Themes in Indian History), Oxford University Press, pp. 1–101 and pp. 257–281 (first published 1990, *Indian Economic and Social History Review*, 27 (2), pp. 189–208).
- (ed.), 2001c, *Trade in Early India* (Oxford in India Readings: Themes in Indian History), Oxford University Press.
- 2002a, "Seafarings, ships and ship owners: India and the Indian Ocean (AD 700–1500)," in D. Parkin and R. Barnes (eds.), *Ships and the Development of Maritime Technology in the Indian Ocean*, London and New York: Routledge/Curzon, pp. 28–61.
- 2002b, *Trade and Traders in Early Indian Society*, Oxford University Press.
- 2004, "An enchanting seascape: through epigraphic lens," *Studies in History*, 20 (2), pp. 306–315.
- 2012, "Merchants, merchandise and merchantmen in the western seaboard of India: a maritime profile (500 BCE – 1500 CE)," in D. P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization*, vol. III, part 7, O. Prakash (ed.), *The Trading World of the Indian Ocean, 1500–1800*, Delhi, Chennai, and Chandigarh: Centre for Studies in Civilizations, pp. 53–116.
- CHAMI, F., 1994, *The Tanzanian Coast in the First Millennium AD*, Uppsaliensis SAA 7, Uppsala.
- 2001, "Chicken bones from a Neolithic limestone cave site, Zanzibar: contact between East Africa and Asia," in F. Chami, G. Pwiti, and C. Radimilahy (eds.), *People, Contacts and the Environment in the African Past* (Studies in the African Past-1), Dar es Salaam University Press, pp. 84–97.
- CHAMI, F. A. and KWEKASON, A., 2003, "Neolithic pottery traditions from the islands, the coast and the interior of East Africa," *African Archaeological Review*, 20 (2), pp. 67–80.
- CHAMPAKALAKSHMI, R. (ed.), 1996, *Trade, Ideology and Urbanization. South India 300 BC to AD 1300*, Delhi: Oxford University Press.
- 2001, "The medieval South Indian guilds: their role in trade and urbanization," in R. Chakravarti (ed.), *Trade in Early India* (Oxford in India Readings: Themes in Indian History), Oxford University Press, pp. 326–343 (first published 1996, in D. N. Jha [ed.], *Society and Ideology in India: Essays in Honour of Professor R. S. Sharma*, Delhi: Munshiram Manoharlal Publishers, pp. 81–93).
- CHANDLER, T., 1987, *Four Thousand Years of Urban Growth: An Historical Census*, Lewiston, NY, Queenston, and Lampeter: Edwin Mellen Press.
- CHANG, K.-C., 2000, "Ancient China and its anthropological significance," in M. Lamberg-Karlovsky (ed.), *Breakout: The Origins of Civilization*, Cambridge, MA: Peabody Museum of Archaeology and Ethnology, Harvard University, pp. 1–11.
- CHANUDET, C., 1989, *Esquisse d'une histoire des Comores et des rapports avec les pays de l'Océan Indien*, INE-Moroni.
- 1991, "Un site majeur de Moheli: Mwali Mdjini," *Études Océan Indien*, 12, "Archéologie des Comores," 11, pp. 9–124.
- 2001, "Islamisation et peuplement de l'arc swahili: une nouvelle perspective," *Études Océan Indien*, 31, "Mare Prasodum: d'une rive à l'autre," pp. 191–205.
- CHANUDET, C. and VÉRIN, P., 1983, "Une reconnaissance archéologique de Mohéli," *Études Océan Indien*, 2, pp. 41–58.
- CHAPELIER, L. A., 1940, *Étude des manuscrits de Louis Armand Chapelier, voyageur-naturaliste (1778–1806)*, ed. H. Poisson, Académie malgache, Collection de Documents concernant Madagascar et les pays voisins, Antananarivo: Pitot de la Beaujardière.

- CHAPELIER, L. A. and HUGON, B., 1912, "Lettres de Chapelier copiées sur les originaux existant aux archives de Port-Louis. Annotées par G. Fontoynont," *Bulletin de l'Académie Malgache*, 12, pp. 297–371.
- CHARLE, C. and VERGER, J., 2007, *Histoire des universités*, Paris: PUF (1st edn. 1994).
- CHARLES-DOMINIQUE, P., 1995, *Voyageurs arabes*, Paris: Gallimard.
- CHASE-DUNN, C., 1988, "Comparing world-systems: towards a theory of semi-peripheral development," *Review*, 19, pp. 29–60.
- CHASE-DUNN, C., and HALL, T. D., 1997, *Rise and Demise. Comparing World-Systems*, Boulder, CO: Westview Press.
- 2000, "Comparing world-systems to explain social evolution," in R. A. Denemark, J. Friedman, B. K. Gills, and G. Modelski (eds.), *World System History: The Social Science of Long-Term Change*, London and New York: Routledge, pp. 85–111.
- CHASE-DUNN, C., and MANNING, E. S., 2002, "City systems and world systems: four millennia of city growth and decline," *Cross Cultural Research*, 36 (4), pp. 379–398.
- CHASE-DUNN, C., PASCIUTI, D., ALVAREZ, A., and HALL, T. D., 2006, "Growth/decline phases and semiperipheral development in the ancient Mesopotamian and Egyptian world-systems," in B. K. Gills and W. R. Thompson (eds.), *Globalization and Global History*, London: Routledge, pp. 114–138.
- CHATTOPADHYAYA, B., 2001, "Markets and merchants in early medieval Rajasthan," in R. Chakravarti (ed.), *Trade in Early India* (Oxford in India Readings: Themes in Indian History), Oxford University Press, pp. 282–311 (first published 1994, in *The Making of Early Medieval India*, Delhi: Oxford University Press, pp. 89–119).
- CHAUDHURI, K. N., 1985, *Trade and Civilization in the Indian Ocean: An Economic History from the Rise of Islam to 1750*, Cambridge University Press.
- 1990, *Asia Before Europe: Economy and Civilization in the Indian Ocean from the Rise of Islam to 1750*, Cambridge University Press.
- 1991, "Reflections on the organizing principle of premodern trade," in J. D. Tracy (ed.), *The Political Economy of Merchant Empires*, Cambridge University Press, pp. 421–442.
- 2006, *The Trading World of Asia and the East India Company 1660–1760*, 2nd edn., Cambridge University Press.
- CHAUDHURY, S., and MORINEAU, M. (eds.), 1999, *Merchants, Companies and Trade: Europe and Asia in the Early Modern Era*, Paris: Maison des Sciences de l'Homme, and Cambridge University Press.
- CHAUNU, P., 1964, *L'Amérique et les Amériques*, Paris: Armand Colin.
- CHEDDADI, A., 2006, *Ibn Khaldūn. L'homme et le théoricien de la civilisation*, Paris: Gallimard.
- CHEN DASHENG and LOMBARD, D., 1988, "Le rôle des étrangers dans le commerce maritime de Quanzhou ("Zaitun") aux 13e et 14e siècles," in D. Lombard and J. Aubin (eds.), *Marchands et hommes d'affaires asiatiques dans l'océan Indien et la mer de Chine: 13e–20e siècles*, Paris: EHESS, pp. 21–30.
- CHEN DA-SHENG, 2000, "A Brunei sultan of the early fourteenth century: a study of an Arabic Gravestone," in V. Elisseff (ed.), *The Silk Roads, Highways of Culture and Commerce*, UNESCO Publication, New York and Oxford: Berghahn Books, pp. 145–157.
- CHERNYKH, E. N., 1992, *Ancient Metallurgy in the USSR: The Early Metal Age*, Cambridge University Press.
- CHEW, S. C., 2000, "Neglecting nature: world accumulation and core-periphery relations, 2500 BC to AD 1990," in R. A. Denemark, J. Friedman, B. K. Gills, and G. Modelski (eds.), *World System History: The Social Science of Long-Term Change*, London and New York: Routledge, pp. 216–234.
- 2001, *World Ecological Degradation: Accumulation, Urbanization, and Deforestation 3000 BC–AD 2000*, Walnut Creek, CA: Altamira.

- CHEYNET, J.-C., 2008, "Texte et image sur les sceaux byzantins: les raisons d'un choix iconographique," in J.-C. Cheynet (ed.), *La société byzantine: l'apport des sceaux*, vol. 1, Paris: Centre de recherche d'histoire et civilisation de Byzance, pp. 113–132.
- CHILDS, S. T. and HERBERT, E. W., 2005, "Metallurgy and its consequences," in A. B. Stahl (ed.), *African Archaeology: A Critical Introduction*, Malden, MA, and Oxford: Blackwell, pp. 276–300.
- CHIN, J. K., 2012, "The Hokkien merchants in the South China Sea, 1500–1800," in D. P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization*, vol. III, part 7, O. Prakash (ed.), *The Trading World of the Indian Ocean, 1500–1800*, Delhi, Chennai, and Chandigarh: Centre for Studies in Civilizations, pp. 433–461.
- CHITTICK, N., 1967, "L'archéologie de la côte orientale africaine," in *Arabes et Islamisés à Madagascar et dans l'océan Indien*, *Revue de Madagascar*, 34–37, and Centre d'Archéologie de la Faculté des Lettres et Sciences Humaines de l'Université de Madagascar, pp. 21–33.
- 1974, *Kikwa: An Islamic Trading City on the East African Coast*, 2 vols., British Institute in Eastern Africa Memoir no. 5, Nairobi: British Institute in Eastern Africa.
- 1984, *Manda: Excavations at an Island Port on the Kenya Coast*, British Institute in Eastern Africa Memoir no. 9, Nairobi: British Institute in Eastern Africa.
- CHRÉTIEN, J.-P., 2000, *L'Afrique des Grands Lacs – Deux mille ans d'histoire*, Paris: Aubier-Historique.
- CHRISTIAN, D., 2000, "Silk Roads or Steppe Roads? The Silk Roads in world history," *Journal of World History*, 11 (1), pp. 1–26.
- 2004, *Maps of Time: An Introduction to Big History*, Berkeley: University of California Press.
- CHRISTIANSEN, B. and LJUNGQVIST, F. C., 2012, "The extra-tropical Northern Hemisphere temperature in the last two millennia: reconstructions of low-frequency variability," *Climate of the Past*, 8, pp. 765–786.
- CITTON, Y., 2007, "L'Ordre économique de la mondialisation libérale: une importation chinoise dans la France des Lumières?," *Revue Internationale de Philosophie*, 1, pp. 9–32.
- CLARENCE-SMITH, G., 2005, "Locally produced textiles on the Indian Ocean periphery 1500–1850: East Africa, the Middle East, and Southeast Asia," Paper presented at the Conference of the Global Economic History Network, Pune, 18–20 December 2005.
- CLARK, H. R., 2009, "Frontier discourse and China's maritime frontier: China's frontiers and the encounter with the sea through early imperial history," *Journal of World History*, 20 (1), pp. 1–33.
- CLARKE, J., 1997, *Oriental Enlightenment: The Encounter between Asian and Western Thought*, London: Routledge.
- CLOT, A., 1996, *L'Égypte des mamelouks. L'empire des esclaves (1250–1517)*, Paris: Perrin.
- COACM: see GRANDIDIER, A. et al.
- COEDÈS, G., 1910, *Textes d'auteurs grecs et latins relatifs à l'Extrême-Orient, depuis le IV^e siècle av. J.-C. jusqu'au XIV^e siècle*, Paris: E. Leroux.
- 1964a, *Les états hindouisés d'Indochine et d'Indonésie*, Paris: de Boccard (1st edn. 1944).
- 1964b, "A possible interpretation of the inscription at Kedukan Bukit (Palembang)," in J. Bastin and R. Roelvink (eds.), *Malayan and Indonesian Studies: Essays Presented to Sir Richard Winstedt on His Eighty-fifth Birthday*, Oxford: Clarendon Press, pp. 24–32.
- 1968, *The Indianized States of Southeast Asia*, Honolulu: East-West Center Press (English edition of *Les états hindouisés d'Indochine et d'Indonésie*).
- 1992, "The Malay inscriptions of Sriwijaya," in P.-Y. Manguin and M. Sheppard (eds.), *Sriwijaya. History, Religion and Language of an Early Malay Polity, Collected Studies by G. Coedès and L.-C. Damais*, Monograph of the Malaysian Branch Royal Asiatic Society no. 20, Kuala Lumpur: Academe Art and Printing Services Sdn. Bhd., pp. 41–92 (first published as

- "Les inscriptions malaises de Çrîwijaya," *Bulletin de l'École française d'Extrême-Orient*, 30, 1930, pp. 29–80).
- COEDÈS, G. and DAMAIS, L.-C., 1992, *Sriwijaya: History, Religion and Language of an Early Malay Polity*, *Collected Studies by G. Coedès and L.-C. Damais*, ed. P.-Y. Manguin and M. Sheppard, Monograph of the Malaysian Branch Royal Asiatic Society no. 20, Kuala Lumpur: Academe Art and Printing Services Sdn. Bhd.
- COLEMAN, J., 1990, *Foundations of Social Theory*, Cambridge, MA: Harvard University Press.
- COLLEDGE, S. and CONOLLY, J., 2010, "Reassessing the evidence for the cultivation of wild crops during the Younger Dryas at Tell Abu Hureyra, Syria," *Environmental Archaeology*, 15 (2), pp. 124–138.
- COLLET, O. J. A., 1925, *Terres et peuples de Sumatra*, Amsterdam: Elsevier.
- CONDOMINAS, G., 1989, "Le souverain époux de son peuple: variations madécasses sur un thème malais," in H. J. M. Claessen (ed.), *Variant Views: Five Lectures from the Perspective of the "Leiden Tradition" in Cultural Anthropology*, Leiden: ICA Publicatie, no. 84, pp. 1–55.
- CONINGHAM, R. A. E., 1999, 2006, *Anuradhapura: The British-Sri Lankan Excavations at Anuradhapura Salgaha Watta 2*, vol. 1: *The Site* (BAR International Series 824); vol. II: *The Artefacts* (BAR International Series 1508), Oxford: Archaeopress.
- 2002, "Beyond and before the imperial frontiers: early historic Sri Lanka and the origins of Indian Ocean trade," *Man and Environment*, 27 (1), pp. 99–107.
- CONTI, N. dei, 2004, *Le voyage aux Indes de Nicolo de Conti*, as told by P. Bracciolini and P. Tapur, Preface by G. Bouchon, trans. D. Ménard, ed. A.-L. Amilhat-Szary, Paris: Chandeigne.
- COOK, E. R., ESPER, J., and D'ARRIGO, R. D., 2004, "Extra-tropical Northern Hemisphere land temperature variability over the past 1000 years," *Quaternary Science Reviews*, 23, pp. 2063–2074.
- COQUERY-VIDROVITCH, C., 1993, *Histoire des villes d'Afrique Noire: des origines à la colonisation*, Paris: Albin Michel.
- 1999, *L'Afrique et les Africains au XIXe siècle*, Paris: Armand Colin.
- 2005, *The History of African Cities South of the Sahara*, trans. M. Baker, Princeton, NJ: Markus Wiener.
- CORBIN, A., 1988, *Le territoire du vide: l'Occident et le désir de rivage, 1750–1840*, Paris: Aubier.
- CORBY, M. and MAYEUR, N., 2011, "Description des côtes nord de Madagascar par Corby et Mayeur à la fin du XVIIIe siècle, commentée par Barthélémy de Froberville," *Études Océan Indien*, 46–47, pp. 17–25.
- CORTESÃO, A. (ed.), 1944, *The Suma Oriental of Tomé Pires*, London: Hakluyt Society, 2 vols.
- COSTIN, C. C., 1998, "Concept of property and access to nonagricultural resources in the Inka empire," in R. C. Hunt and A. Gilman (eds.), *Property in Economic Context*, Lanham, MD: University Press of America, pp. 119–137.
- COULAUD, D., 1973, *Les Zafimaniry, un groupe ethnique de Madagascar à la poursuite de la forêt*, Antananarivo: Fanontam-boky Malagasy.
- CRADDOCK, P. T., 2003, "Cast iron, fired iron, crucible steel: liquid iron in the Ancient World," in P. T. Craddock and Lang (eds.), *Mining and Metal Production through the Ages*, London: British Museum Press, pp. 231–255.
- CRONE, P., 1987, *Meccan Trade and the Rise of Islam*, Oxford: Blackwell (2nd edn. 2004).
- CROWLEY, T. J., 2000, "Causes of climate change over the past 1000 years," *Science*, 289 (5477), pp. 270–277.
- CROWTHER, A., HORTON, M. C., KOTARBA-MORLEY, A., PETEK, N., CHRISTIE, A., MILLS, W., TIBESASA, R., and BOIVIN, N. 2012, "Report on fieldwork at the Juani Primary School site and Pango la Ukunju, Juani island (Mafia), Tanzania, July–August 2012," unpublished report submitted to the Commission for Science and Technology, Tanzania and to the Antiquities Department, Ministry of Natural Resources and Tourism, Tanzania.

- CROWTHER, A., HORTON, M., KOTARBA-MORLEY, A., PRENDERGAST, M., QUINTANA MORALES, E., WOOD, M., SHIPTON, C., FULLER, D. Q., TIBESASAH, R., MILLS, W., and BOIVIN, N., 2014, "Iron Age agriculture, fishing and trade in the Mafia Archipelago, Tanzania: new evidence from Ukunju Cave," *Azania*, 49 (1), pp. 21–44.
- CROWTHER, A., VEALL, M. A., BOIVIN, N., HORTON, M., KOTARBA-MORLEY, A., FULLER, D. Q., FENN, F., HAJI, O., and MATHESON, C. D., 2015, "Use of Zanzibar copal (*Hymenaea verrucosa* Gaertn.) as incense at Unguja Ukuu, Tanzania in the 7th–8th century CE: chemical insights into trade and Indian Ocean interactions," *Journal of Archaeological Science*, 53, pp. 374–390.
- CURTIN, P. D., 1984, *Cross-Cultural Trade in World History*, Cambridge University Press.
- CZEGLEDY, K., 1966, "Sacred kingship among the peoples of the Steppes," trans. W. L. North of K. Czeglédy, "Das Sakrale Königtum bei den Steppenvölkern," *Numen*, 13, pp. 14–26.
- D'ARRIGO, R. D., COOK, E. R., WILSON, R. J., ALLAN, R., and MANN, M. E., 2005, "On the variability of ENSO over the past six centuries," *Geophysical Research Letters*, 32.
- D'ARRIGO, R., WILSON, R., and JACOBY, G., 2006, "On the long-term context for late twentieth century warming," *Journal of Geophysical Research*, 111, D03103, doi:10.1029/2005JD006352.
- DAHL, O. C., 1983, *Sorabe. révélant l'évolution du dialecte antemoro*, Antananarivo: Trano Printy Loterana.
- 1991, *Migration from Kalimantan to Madagascar*, Oslo: Institute for Comparative Research in Human Culture.
- DAHLE, L., 1971, *Anganon'ny ntaolo*, Antananarivo: Imprimerie Luthérienne.
- DALE, S. F., 1980, *Islamic Society on the South Asian Frontier: The Mapillas of Malabar (1498–1922)*, Oxford: Clarendon Press.
- DAMAI, L., 1964, "Études sino-indonésiennes, III: La transcription chinoise Ho-ling comme désignation de Java," *Bulletin de l'École française d'Extrême-Orient*, 52, pp. 93–141.
- 1967, "Le calendrier de l'ancienne Java," *Journal Asiatique*, 255 (1), pp. 133–141.
- 1969, "Études javanaises, III: À propos des couleurs symboliques des points cardinaux," *Bulletin de l'École française d'Extrême-Orient*, vol. 56, pp. 75–118.
- DAMIR, B. A., BOULINIER, G., and OTTINO, P., 1985, *Traditions d'une lignée royale des Comores*, Paris: L'Harmattan.
- DANDOUAU, A., 1922, *Contes populaires des Sakalava et des Tsimihety de la région d'Analalava*, Algiers: J. Carbonel.
- 1933, "Darafify: légende Betsimisaraka," *Revue de Madagascar*, 55–57.
- DARRAG, A., 1961, *L'Égypte sous le règne de Barsbay, 825–841/1422–1435*, Damascus.
- DAS GUPTA, A., 1991, "The changing face of the Indian maritime merchant," in R. Ptak and D. Rothermund (eds.), *Emporia, Commodities and Entrepreneurs in Asian Maritime Trade, c. 1400–1750*, Stuttgart: Steiner Verlag, pp. 353–362.
- DAVIDSON, B., with MHINA, J. E. F. and OGOT, B. A., 1977, *The Growth of African Civilisation. East and Central Africa to the late Nineteenth Century*, London: Longman (1st edn. 1967).
- DEBRET, M., BOUT-ROUMAZEILLES, V., MASSEI, N., GROUSSET, F., DESMET, M., SEBAG, D., PETIT, J.-R., TRENTESAUX, A., and COPARD, Y., 2006, "Holocene climate change and solar forcing in the North Atlantic area: evidence of 2500, 1500 and 1000 years periodicity by wavelet analysis," *Geophysical Research Abstracts*, 8.
- DECARY, R., 1959, "Les eaux douces et leurs habitants dans les traditions et industries malgaches," *Mémoires de l'Institut Scientifique de Madagascar*, series C, 5, pp. 233–266.
- DECARY, R., and FAUBLEE, J., 1958, "Contribution au folklore des populations côtières," *Bulletin de l'Académie Malgache*, n.s., 36, pp. 273–300.
- DECKER, M., 2009, "Plants and progress: rethinking the Islamic agricultural revolution," *Journal of World History*, 20 (2), pp. 187–206.

- DÉLIVRÉ, A., 1974, *L'histoire des rois d'Imerina. Interprétation d'une tradition orale*, Paris: Klincksieck.
- DELOCHE, J., 1996, "Iconographic evidence on the development of boat and ship structures in India (2nd C. BC – 15th C. AD): a new approach," in H. P. Ray and J.-F. Salles (eds.), *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, Delhi: Manohar, pp. 199–224.
- DELORD, R., 1957, "Note sur la croyance en la réincarnation des princes betsileo sous la forme du serpent: à propos de la locution 'Mangatsiaka antara velona'," *Bulletin de l'Académie Malgache*, n.s., 35, pp. 115–120.
- 1961, "Remarques sur des questions d'ethnographie en pays sakalava," *Bulletin de l'Académie Malgache*, 39, pp. 26–27.
- DENEMARK, R., 2016, "The Irish and the Vikings on the edge of central civilization," paper prepared for a meeting on *Systemic Boundaries*, March 2016, University of California, Riverside.
- DENEMARK, R., FRIEDMAN, J., GILLS, B., and MODELSKI, G. (eds.), 2000, *World-System History: The Social Science of Long-Term Change*, London: Routledge.
- DENG, G., 1993, *Development versus Stagnation: Technological Continuity and Agricultural Process in Premodern China*, Westport, CT: Greenwood.
- 1997, *Chinese Maritime Activities and Socioeconomic Development, c. 2100 BC – 1900 AD*, Westport, CT: Greenwood.
- 1999, *The Premodern Chinese Economy. Structural Equilibrium and Capitalist Sterility*, London and New York: Routledge.
- DENOIX, S., 2000, "Autorités urbaines et gestion de la ville," in J.-C. Garcin (ed.), *Grandes villes méditerranéennes du monde musulman médiéval*, École Française de Rome, pp. 285–295.
- DERIDEAUX, P., 2002–2005a and b, *East Africa's Contacts with the Classical World and Medieval Authors About East Africa*, www.geocities.com/pieterderideaux/contents.html
- DESCHAMPS, H., 1960, *Histoire de Madagascar*, Paris: Berger-Levrault.
- DESCOMBES, R., 2000, *Les carrés magiques: histoire, théorie et technique du carré magique, de l'Antiquité aux recherches actuelles*, Paris: Vuibert.
- DEVENDRA, S., 2002, "Pre-Modern Sri Lankan ships," in D. Parkin and R. Barnes (eds.), *Ships and the Development of Maritime Technology in the Indian Ocean*, London and New York: Routledge/Curzon, pp. 128–173.
- DEVIC, L. M., 1878, *Adjâib al-Hind, Les Merveilles de l'Inde*, Paris: A. Lemerre.
- 1975, *Le pays des Zendjs ou la côte orientale d'Afrique au Moyen-Âge*, Amsterdam: Oriental Press (1st edn. 1883).
- DEVISSE, J., 1972, "Routes de commerce et échanges en Afrique occidentale en relation avec la Méditerranée: un essai sur le commerce africain médiéval du XI^e au XVI^e siècle," *Revue d'Histoire Économique et Sociale*, 50, pp. 42–73 and 357–397.
- 1985, "L'Afrique dans les relations intercontinentales," with Shuhi Labib, in D. T. Niane (ed.), *Histoire générale de l'Afrique*, vol. IV: *L'Afrique du XII^e au XVI^e siècle*, Paris: UNESCO/Nouvelles Éditions Africaines, pp. 693–730.
- 1990a, "Les Africains, la mer et les historiens," *Cahiers d'Études Africaines*, 115–116, pp. 397–418.
- 1990b, "Commerce et routes du trafic en Afrique occidentale," in M. El Fasi and I. Hrbek (eds.), *Histoire générale de l'Afrique*, vol. III: *L'Afrique du VII^e au XI^e siècle*, Paris: UNESCO/Nouvelles Éditions Africaines, pp. 397–463.
- 1993, "L'or," in *Vallées du Niger. Catalogue d'exposition*, Paris: Éditions de la Réunion des musées nationaux, pp. 344–357.

- 1997, "Trafic et routes du trafic en Afrique occidentale," in M. El Fasi and I. Hrbek (eds.), *Histoire générale de l'Afrique*, vol. III: *L'Afrique du VIIe au XIe siècle*, abridged edn., Paris: Présence Africaine/Edicef/UNESCO, pp. 285–318.
- DEWAR, R. E., 1984, "Extinctions in Madagascar: the loss of the subfossil fauna," in P. S. Martin and R. G. Klein (eds.), *Quaternary Extinctions: A Prehistoric Revolution*, Tucson: University of Arizona Press, pp. 574–593.
- DEWAR, R. E. and BURNEY, D., 1994, "Recent research in the paleoecology of the Highlands of Madagascar and its implications for prehistory," *Taloha*, 12, pp. 79–87.
- DEWAR, R. E., RADIMILAHY, C., RASOLOFOMAMPINANINA, L. D., and WRIGHT, H. T., 2010, "Early settlement in the region of Fenoarivo Atsinanana," in *Civilisations des mondes insulaires (Madagascar, îles du canal de Mozambique, Mascareignes, Polynésie, Guyanes): mélanges en l'honneur du Professeur Claude Allibert*, Paris: Karthala, pp. 677–740.
- DEWAR, R. E. and RAKOTOVOLOLONA, S., 1992, "La chasse aux subfossiles: les preuves du IIe siècle au 13e siècle," *Taloha*, 11, pp. 5–15.
- DEWAR, R. E. and WRIGHT, H. T., 1993, "The culture history of Madagascar," *Journal of World Prehistory*, 7 (4), pp. 417–466.
- DEYELL, J., 1983, "The China connection: problems of silver supply in medieval Bengal," in J. F. Richards (ed.), *Precious Metals in the Later Medieval and Early Modern Worlds*, Durham, NC: Carolina Academic Press, pp. 207–229 (repr. in Subrahmanyam 1994, pp. 112–136).
- 1994: see DEYELL, J., 1983.
- 1999, *Living without Silver*, New Delhi: Oxford University Press.
- 2001, "The Gurjara-Pratiharas," in R. Chakravarti (ed.), *Trade in Early India*, Oxford University Press, pp. 396–415.
- DEZ, J., 1960, *Le dialecte betsimisaraka du Sud*, dactylog. (I Introduction; II Lexique; III Proverbes).
- 1981, *Vocabulaire pour servir au déchiffrement des documents arabico-malgaches*, Université Paris 7.
- 1983, *Les sorabe: sources documentaires*, Université Paris VII – CNRS-RCP 716.
- 1984, "Essai sur le calendrier arabico-malgache," *Études sur l'Océan Indien*, Coll. des travaux de l'Université de la Réunion, pp. 58–119.
- DEZ, J. and VIRÉ, F., 1982, *Le manuscrit arabico-malgache Malayo-Polynésien n°26 de la Bibliothèque Nationale*, 2 vols., Paris: CNRS-RCP 441.
- DHAVALIKAR, M. K., 2004, "The Nile floods and Indian monsoon," in Y. Yasuda and V. Shinde (eds.), *Monsoon and Civilization*, Delhi: Lustre Press, pp. 207–212.
- DIAMOND, J., 1997, *Guns, Germs, and Steel: The Fates of Human Societies*, New York and London: W. W. Norton.
- 2005, *Collapse: How Societies Choose to Fail or Succeed*, New York: Viking Penguin.
- DI COSMO, N., 1999a, "State formation and periodization in Inner Asian History," *Journal of World History*, 10 (1), pp. 1–40.
- 1999b, "The northern frontier in pre-imperial China," in M. Loewe and E. L. Slaughter (eds.), *The Cambridge History of Ancient China: From the Origins of Civilization to 221 BC*, Cambridge University Press, pp. 885–966.
- DICK-READ, R., 2005, *The Phantom Voyagers: Evidence of Indonesian Settlement in Africa in Ancient Times*, Winchester: Thurlton Publishing.
- DIGBY, S., 1971, *War-Horse and Elephant in the Delhi Sultanate*, Oxford: Orient Monographs.
- 1982a, b, and c "Economic conditions before 1200," "The currency system," and "The maritime trade of India," in T. Raychaudhuri and I. Habib (eds.), *The Cambridge Economic History of India*, vol. 1: c. 1200–c. 1750, Cambridge University Press, pp. 45–47, 93–101, and 125–162.
- 2004, "Before Timur came: provincialization of the Delhi Sultanate through the fourteenth century," *Journal of the Economic and Social History of the Orient*, 47 (3), pp. 298–356.

- DJEBBAR, A., 2001, *Une histoire de la science arabe, entretiens avec Jean Rosmorduc*, Paris: Éditions du Seuil.
- Documentos sobre os Portugueses em Moçambique e na África Central, 1497-1840 (DPMAC)*, Lisbon: Centro de Estudos Historicos Ultramarinos, vols. I-VIII, 1962-1975.
- DOMENICHINI, J.-P., 1976, *Les dieux au service des rois*, Paris: CNRS (reissued 1985).
- 1978, "Antehiroka et Vazimba: contribution à l'histoire de la société du 16e au 19e siècles," *Bulletin de l'Académie Malgache*, 56 (1-2), pp. 11-21.
- DOMENICHINI, J.-P. and DOMENICHINI-RAMIARAMANANA, B., 1983, "Madagascar dans l'océan Indien avant le XIIIe siècle," *Nouvelles du Centre d'Art et d'Archéologie*, 1, pp. 5-19.
- DOMENICHINI-RAMIARAMANANA, B., 1988, "Madagascar," in N. Revel (ed.), *Le riz en Asie du Sud-Est. Atlas du vocabulaire de la plante, Articles*, Paris: École des Hautes Études en Sciences Sociales, pp. 179-226.
- 1990, "Madagascar," in M. El Fasi and I. Hrbek (eds.), *Histoire générale de l'Afrique*, vol. III, *L'Afrique du VIIe au XIe siècle*, Paris: Présence Africaine/Edicef/UNESCO, pp. 727-748.
- DRÈGE, J.-P., 1986, *La Route de la Soie: paysages et légendes*, Paris: La Bibliothèque des Arts.
- 2000, *Marco Polo et la Route de la Soie*, Paris: Gallimard (1st edn. 1989).
- DRURY, R., 1906, "Les aventures de Robert Drury pendant ses quinze années de captivité à Madagascar et son second voyage dans cette île (1701-1717 et 1719-1720)," in A. Grandidier *et al.* (eds.), *COACM*, vol. IV.
- DUARTE, R. T., 1993, *Northern Mozambique in the Swahili World*, Studies in African Archaeology 4, Eduardo Mondlane University (Mozambique), Uppsala University (Sweden).
- DUBOIS, H. M., 1938, *Monographie des Betsileo*, Paris: Institut d'Ethnologie.
- DUCATEZ, G., 2003, "Aden et l'océan Indien au XIIIe siècle," *Annales Islamologiques*, 37, pp. 137-156.
- 2004, "Aden aux XIIe et XIIIe siècles selon Ibn al-Muğāwir," *Annales Islamologiques*, 38, pp. 159-200.
- DUCÈNE, J.-C., 2010, "Review of Abū 'Imrān Mūsā ibn Rabāh al-Awsī al-Sīrāfi. *Al-ṣaḥīḥ min abbār al-bihār wa-ağā 'ibihā*, Yūsuf Al-Hādī (ed.), Damas, 1326 (H.)/2006," *Journal Asiatique*, 298 (2), pp. 523-528.
- 2015, "Une nouvelle source arabe sur l'océan Indien au Xe siècle: le *Saḥīḥ min abbār al-bihār wa-ajā 'ibihā* d'Abū 'Imrān Mūsā ibn Rabāh al-Awsī al-Sīrāfi," *Afriques*, 6, <http://afriques.revues.org>
- DUCZKO, W., 2004, *Viking Rus: Studies on the Presence of Scandinavians in Eastern Europe*, Leiden: Brill.
- DUMONT, L., 1966, *Homo hierarchicus: essai sur le système des castes*, Paris: Gallimard.
- 1983, *Essais sur l'individualisme: une perspective anthropologique sur l'idéologie moderne*, Paris: Seuil.
- DUPLANTIER, J. M., CATALAN, J., ORTH, A., GROLLEAU, B., and BRITTON-DAVIDIAN, J., 2003, "Systematics of the black rat in Madagascar: consequences for the transmission and distribution of plague," *Biological Journal of the Linnean Society*, 78, pp. 335-341.
- DUPLANTIER, J.-M., ORTH, A., CATALAN, J., and BONHOMME, F., 2002, "Evidence for a mitochondrial lineage originating from the Arabian peninsula in the Madagascar house mouse (*Mus musculus*)," *Heredity*, 89, pp. 154-158.
- DUPOIZAT, M.-F., 1992, "Rapport préliminaire sur la céramique importée à Banten Girang," *Arts Asiatiques*, 47, pp. 57-68.
- 2008, "Chronology of various types of ceramics based on some recent excavations in the Malay world," in E. A. Bacus, I. C. Glover, and P. D. Sharrock (eds.), *Interpreting Southeast Asia's Past, Monument, Image and Text, Selected Papers from the Tenth International Conference of the*

- European Association of Southeast Asian Archaeologists*, vol. 11, EurASEAA 10, National University of Singapore, pp. 323–332.
- DURAND-DASTÈS, F., 1990, “Les mémoires du monde,” in R. Brunet and O. Dollfus (eds.), *Géographie universelle*, vol. 1: *Mondes nouveaux*, Paris and Montpellier: Hachette-Reclus, pp. 310–365.
- DUSSUBIEUX, L., 2001, “L’apport de l’ablation laser couplée à l’ICP-MS à la caractérisation des verres : application à l’étude du verre archéologique de l’océan Indien,” thèse de doctorat, Université d’Orléans.
- 2010, “Compositional analysis of ancient glass fragments from North Sumatra, Indonesia,” in D. Perret and H. Surachman (eds.), *Histoire de Barus III: Regards sur une place marchande de l’océan Indien (XIIe–milieu du XVIIIe siècle)*, Paris: Association Archipel/EFEO, pp. 385–417.
- DUSSUBIEUX, L. and KUSIMBA, C. M., 2012, “Glass vessels in Sub-Saharan Africa: a compositional study of samples from Mtwapa, Kenya,” in I. Liritzis and C. M. Stevenson (eds.), *Obsidian and Ancient Manufactured Glasses*, Albuquerque: University of New Mexico Press, pp. 143–156.
- DUSSUBIEUX, L., KUSIMBA, M., GOGTE, V., KUSIMBA, S. B., GRATUZE, B., and OKA, R., 2008, “The trading of ancient glass beads: new analytical data from South Asian and East African soda-alumina glass beads,” *Archaeometry*, 50 (5), pp. 797–821.
- DUTTA, K. T., 2016, “A study on urban centres in eastern India: a special focus on Bengal (ninth century A.D. – twelfth century A.D.),” *International Journal of Innovative Research & Development*, 5 (8), pp. 92–109.
- DUYVENDAK, J. J. L., 1949, *China’s Discovery of Africa*, London: Probsthain.
- DYEN, I., 1965, *A Lexicostatistical Classification of the Austronesian Languages*, International Journal of American Linguistics, Memoir 19, Baltimore, MD: Waverly Press.
- EDENS, C., 1993, “Comments” on A. G. Frank’s article “Bronze Age world system cycles,” *Current Anthropology*, 34 (4), pp. 408–409.
- EDSON, E., and SAVAGE-SMITH, E., 2004, *Medieval Views of the Cosmos*, Bodleian Library, University of Oxford.
- EGGERT, K., 2001, “Malagasy commentary,” *Ethnohistory*, 48 (1–2) (special issue, J. C. Kaufmann (ed.), *Emerging Histories in Madagascar*), pp. 309–318.
- EHRET, C., 1985, “Entre la côte et les Grands Lacs,” in D. T. Niane (ed.), *Histoire générale de l’Afrique*. vol. IV: *L’Afrique du XIIIe au XVIe siècle*, Paris: UNESCO/ Nouvelles Éditions Africaines, pp. 523–541.
- EKBLOM, A., 2004, “Changing landscapes: an environmental history of Chibueni, Southern Mozambique,” Ph.D. dissertation, Uppsala University, Department of Archaeology and Ancient History.
- EKHOLM, K., 1972, *Power and Prestige: The Rise and Fall of the Kongo Kingdom*, Uppsala: Skriv Service AB.
- EKHOLM, K. and FRIEDMAN, J., 1993, “‘Capital’ imperialism and exploitation in ancient world systems,” in A. G. Frank and B. K. Gills (eds.), *The World System: Five Hundred Years or Five Thousand?*, London and New York, Routledge, pp. 59–80 (first published in *Review*, 4 [1], 1982, pp. 87–109).
- EKHOLM FRIEDMAN, K. and FRIEDMAN, J., 2007, *Historical Transformations: The Anthropology of Global Systems*, Walnut Creek, CA: Altamira Press.
- ELISSEEFF, N., 1977, *L’Orient musulman au Moyen Âge*, Paris: Armand Colin.
- ELLIOT, H. M. and DOWNSON, J. (eds.), 1871, *The History of India as Told by Its Own Historians*, vol. 3, London: Trübner and Co.
- ELLIS, S., 1979, “Un texte du 17e siècle sur Madagascar,” *Omaly sy Anio (Hier et Aujourd’hui)*, 9, pp. 151–166.

- ELVIN, M., 1973, *The Pattern of the Chinese Past: A Social and Economic Interpretation*, Stanford University Press.
- EMMANUEL, A., 1969, *L'échange inégal*, Paris: Maspéro.
- EMPHOUX, J.-P., 1978, "Note sur une culture ancienne du 12^e siècle en pays antandroy," *Bulletin de l'Académie Malgache*, 56/1-2, pp. 39-43.
- 1981, "Archéologie de l'Androy. Deux sites importants: Andranosoa et le manda de Ramananga," *Omaly sy Anio (Hier et Aujourd'hui)*, 13-14, pp. 89-97.
- EPSTEIN, S. R., 2000a, "The rise and fall of Italian city-states," in M. H. Hansen (ed.), *Creating Economic Order: Record-Keeping, Standardization and the Development of Accounting in the Ancient Near East*, Copenhagen: Det Kongelige Danske Videnskabernes Selskab, pp. 277-294.
- 2000b, *Freedom and Growth: The Rise of States and Markets in Europe, 1300-1750*, London: Routledge.
- ESPER, J., COOK, E. R., and SCHWEINGRUBER, F. H., 2002, "Low frequency signals in long tree-ring chronologies for reconstructing past temperature variability," *Science*, 295 (5563), pp. 2250-2253.
- ESPER, J., DÜTHORN, E., KRUSIC, P. J., TIMONEN, M., and BÜNTGEN, U., 2014, "Northern European summer temperature variations over the Common Era from integrated tree-ring density records," *Journal of Quaternary Science*, 29 (5), pp. 487-494.
- EYMARD-DUVERNAY, F., 2007, "Les institutions de valorisation des biens et du travail," *Colloque Théorie de la valeur et sciences sociales*, 19 and 20 janvier 2007, Université de Paris X-Nanterre, ÉconomiX, Fédération Capitalisme(s) and Démocratie(s).
- FAGAN, B. M., 1985, "Les bassins du Zambèze et du Limpopo (+ 1100 / + 1500)," in D. T. Niane (ed.), *Histoire générale de l'Afrique*, vol. IV: *L'Afrique du XIII^e au XVI^e siècle*, Paris: UNESCO/Nouvelles Éditions Africaines, pp. 571-599.
- 2004, *The Long Summer: How Climate Changed Civilization*, New York: Basic Books.
- 2009, *Floods, Famines and Emperors: El Niño and the Fate of Civilizations*, New York: Basic Books.
- FAHD, T., 1986, "Malhama," in C. E. Bosworth et al. (eds.), *Encyclopédie de l'Islam, Nouvelle Edition*, vol. VI, Leiden: Brill; Paris: Maisonneuve et Larose, pp. 231-232.
- 1987, *La divination arabe*, Paris: Sindbad (1st edn. 1966).
- FARRIS, W. W., 2009, *Japan's Medieval Population: Famine, Fertility, and Warfare in a Transformative Age*, University of Hawaii Press.
- FATTOVICH, R., 2010, "The development of ancient states in the northern Horn of Africa, c. 3000 BC - AD 1000: an archaeological outline," *Journal of World Prehistory*, 23, pp. 145-175.
- FAUBLÉE, J., 1970, "Les manuscrits arabico-malgaches du Sud-Est: leur importance historique," *Revue Française d'Histoire d'Outre-Mer*, 57 (208), pp. 268-287.
- FAUVELLE-AYMAR, F.-X., 2006, *Histoire de l'Afrique du Sud*, Paris: Seuil.
- 2013, *Le rhinocéros d'or. Histoires du Moyen Âge africain*, Paris: Alma Édition.
- FAUVELLE-AYMAR, F.-X., and HIRSCH, B., 2003, "Voyage aux frontières du monde: topologie, narration et jeux de miroir dans la *Rihla* de Ibn Battûta," *Afrique et Histoire*, 1, pp. 75-122.
- FAVRE, P., 1875, *Dictionnaire Malais-Français*, 2 vols., Vienna: Imprimerie Impériale and Royale.
- FENN, T. R., KILICK, D. J., CHESLEY, J., MAGNAVITA, S., and RUIZ, J., 2009, "Contacts between West Africa and Roman North Africa: archaeometallurgical results from Kissi, northeastern Burkina Faso," in S. Magnavita, L. Koté, P. Breunig, P. and O. A. Idé (eds.), *Crossroads / Carrefour Sahel. Cultural and Technological Developments in First Millennium BC / AD West Africa. Developments culturels et technologiques pendant le premier millénaire BC / AD dans l'Afrique de l'Ouest*, Journal of African Archaeology Monograph Series 2, pp. 119-146.
- FERNANDEZ-ARMESTO, F., 2006, *The World: A History*, vol. I: *To 1500*; vol. II: *Since 1300*, Upper Saddle River, NJ: Prentice Hall.

- FERRAND, G., 1891, 1893, *Les Musulmans à Madagascar et aux îles Comores, part 1: Les Antaimorona; part 2: Zafindraminia, Antambahoaka, Onjatsy, Antaiony, Zafikazimambo, Antaivandrika et Sabatavy*, Paris: E. Leroux.
- 1902, "La légende de Raminia d'après un manuscrit arabico-malgache de la Bibliothèque Nationale," *Extrait du Journal Asiatique*, Paris; Imprimerie Nationale (repr. in *Taloha*, 6).
- 1904, *Un texte arabico-malgache du XVI^e siècle, transcrit, traduit et annoté d'après les Mss. 7 et 8 de la Bibliothèque Nationale, tiré des Notices et extraits des manuscrits de la Bibliothèque Nationale et autres bibliothèques*, vol. XXXVIII, Paris: Imprimerie Nationale.
- 1905a, "Un chapitre d'astrologie arabico-malgache," *Journal Asiatique*, 9–10, pp. 193–273.
- 1905b, "Les migrations musulmanes et juives à Madagascar," *Annales du Musée Guimet, Revue d'Histoire des Religions*, pp. 381–417.
- 1907, "Les îles Râmny, Lâmary, Wâkwâk, Komor des géographes arabes et Madagascar," *Journal Asiatique*, 10, pp. 433–566 (repr. Paris: Imprimerie Nationale, 1908).
- 1913–1914, *Relation des voyages et textes géographiques arabes, persans et turcs relatifs à l'Extrême-Orient du VIII^e au XVIII^e siècle*, 2 vol., Paris: E. Leroux.
- 1918, *A propos d'une carte javanaise du 15^e siècle*, Paris: Imprimerie Nationale (from the *Journal Asiatique*, July–August 1918).
- 1919, "Le K'ouen-Louen et les anciennes navigations interocéaniques dans les Mers du Sud," *Journal Asiatique*, 13, March–April, pp. 239–333; May–June, pp. 431–492; July–August, pp. 5–68; September–October, pp. 201–244 (published as a book, Paris: Imprimerie Nationale, 1919).
- 1920, "Les poids, mesures et monnaies des mers du Sud aux xve et xviii^e siècles," *Journal asiatique*, July–September, pp. 1–150.
- 1922a, *Voyage du marchand arabe Sulayman en Inde et en Chine, rédigé en 851, suivi de remarques par Abû Zayd Hasan (vers 916), traduit de l'arabe avec introduction, glossaire et index*, Paris: Bossard.
- 1922b, "L'empire de Çrividjaya," *Journal Asiatique*, 20, pp. 1–104 and 164–246.
- 1924a, "L'élément persan dans les textes nautiques arabes des xve et xvii^e siècles," *Journal Asiatique*, April–June, pp. 193–257.
- 1924b, "Sayâbidja," in M. T. Houtsma *et al.* (eds.), *Encyclopédie de l'islam*, vol. IV, Leyden and Paris: Brill, pp. 208–209.
- 1987, "Zabag," in *First Encyclopedia of Islam*, vol. VIII, Leiden: Brill, pp. 1182–1183.
- FILESI, T., 1972, *China and Africa in the Middle Ages*, London: Frank Cass (1st edn. 1962).
- FINDLAY, R., and O'ROURKE, K., 2007, *Power and Plenty. Trade, War, and the World Economy in the Second Millennium*, Princeton University Press.
- FINLAY, R., 2000, "China, the West, and world history in Joseph Needham's *Science and Civilization in China*," *Journal of World History*, 11 (2), pp. 265–303.
- FISCHEL, R. S., 2014, "Turning king to Messiah: the Islamic king in central Asia and India: on Azfar's Moin's *The Millennial Sovereign: Sacred Kingship and Sainthood in Islam*," <http://marginalia.lareviewofbooks.org/>
- FISCHEL, W., 1933, "The origin of banking in mediaeval Islam," *Journal of the Royal Asiatic Society*, pp. 339–352 and 569–603.
- 1996, "The spice trade in Mamluk Egypt," in M. N. Pearson (ed.), *Spices in the Indian Ocean World*, Aldershot: Variorum, and Brookfield: Ashgate, pp. 51–68 (first published in *Journal of the Economic and Social History of the Orient*, 1, 1958, pp. 157–174).
- FISCHER, H., 1989, "The western and central Sudan and East Africa," in P. M. Holt, A. K. S. Lambton, and B. Lewis (eds.), *The Cambridge History of Islam*, vol. 11A, Cambridge University Press, pp. 345–405.
- FITZGERALD-HUBER, L. G., 2003, "The Qijia culture: paths east and west," *Museum of Far Eastern Antiquities* (Stockholm), 75, pp. 55–78.

- FLACOURT, E. de, 1910 [1658], *Dictionnaire de la langue de Madagascar avec un petit recueil des noms et dictons propres des choses qui sont d'une même espèce, plus quelques mots du langage des sauvages de la baie de Saldaigne au Cap de Bonne-Espérance*, in A. and G. Grandidier, Charles-Roux, C. Delhorbe, and H. Froidevaux (eds.), *Collection des ouvrages anciens concernant Madagascar (COACM)*, Paris: Comité de Madagascar et Union Coloniale, vol. VII, pp. 206–457.
- 1995, 2007 [1661], *Histoire de la Grande Isle Madagascar*, ed. C. Allibert, Paris: Karthala-INALCO (1st edn. Allibert 1995a).
- FLECKER, M., 2001, "A ninth century AD Arab or Indian shipwreck in Indonesia: first evidence for direct trade with China," *World Archaeology*, 32 (3), pp. 335–354.
- 2004–2005, "Treasure from the Java Sea (the 10th century Intan shipwreck)," *Heritage Asia*, 2 (2), www.maritime-explorations.com/Intan.pdf
- FLEISHER, J. B., 2004a, "Viewing stonetowns from the countryside : an archaeological approach to Swahili regional systems, AD 800–1500," Ph.D. thesis, University of Virginia.
- 2004b, "Behind the Sultan of Kilwa's 'rebellious conduct': local perspectives on an international East African Town," in P. Lane and A. Reid (eds.), *African Historical Archaeologies*, New York: Kluwer Academic/Plenum, pp. 91–123.
- 2010, "Rituals of consumption and the politics of feasting on the eastern African coast, AD 700–1500," *Journal of World Prehistory*, 23, pp. 195–217.
- FLEISHER, J., LANE, P., LAVIOLETTE, A., HORTON, M., POLLARD, E., MORALES, E. Q., VERNET, T., CHRISTIE, A., and WYNNE-JONES, S., 2015, "When did the Swahili become maritime?," *American Anthropologist*, 117 (1), pp. 100–115.
- FLEISHER, J. and LAVIOLETTE, A., 1999, "The recovery of Swahili settlements in the absence of stone architecture: two preliminary surveys from Pemba Island, Tanzania," *Nyame Akuma*, 54, pp. 641–78.
- 2013, "The early Swahili trade village of Tumbé, Pemba Island, Tanzania, AD 600–950," *Antiquity*, 87, pp. 1151–1168.
- FLEISHER, J. and WYNNE-JONES, S. 2011, "Ceramics and the early Swahili: deconstructing the early Tana tradition," *African Archaeological Review*, 28, pp. 245–278.
- FLYNN, D. O. and GIRALDEZ, A., 2008, "Born again: globalization's sixteenth century origins (Asian/global versus European dynamics)," *Pacific Economic Review*, 13 (3), pp. 359–387.
- FOLCH FORNESA, D. (ed.), 2008, *Els grans viatges de Zheng He: les expedicions marítimes de la Xina del segle XV*, catalogue of the exhibition of the Museu Marítim, Barcelona.
- FONTEIN, J. (ed.), 1990, *The Sculpture of Indonesia*, Washington, DC: National Gallery of Art; New York: Harry N. Abrams.
- FORSLUND, A.-L., 2003, *Pottery and East Africa*, University of Uppsala.
- FOUCAULT, M., 2004, *Sécurité, territoire, populations*, Paris: Gallimard-Seuil.
- FOURQUET, R., SARTHOU, J., ROUX, J., and AORI, K., 1974, "Hémoglobine S et origines du peuplement de Madagascar: nouvelle hypothèse sur son introduction en Afrique [Hemoglobin S and origins for the settlement of Madagascar: new hypothesis on its introduction to Africa]," *Archives de l'Institut Pasteur Madagascar*, 43, pp. 185–220.
- FOY, D., 2015, "Les verres," in A. Rougeulle (ed.), *Sharma: un entrepôt de transit médiéval sur la côte du Hadramawt (Yémen, c. 980–1180)*, Oxford: Archaeopress, pp. 323–367.
- FRANK, A. G., 1970, *Le développement du sous-développement*, Paris: Maspéro.
- 1993a, "Bronze Age world system cycles," *Current Anthropology*, 34 (4), pp. 383–405 and 419–430.
- 1993b, "The world is round and wavy: demographic cycles and structural analysis in the world system: a review essay of Jack A. Goldstone's *Revolutions and Rebellions in the Early Modern World*," in N. Keddie (ed.), *Debating Revolutions*, New York University Press, pp. 200–220.
- 1998, *ReOrient: Global Economy in the Asian Age*, Berkeley, Los Angeles, and London: University of California Press.

- 2015, *ReOrienting the 19th Century: Global Economy in the Continuing Asian Age*, ed. and with an introduction by Robert A. Denemark. Afterword by Barry K. Gills, Boulder, CO, and London: Paradigm.
- FRANK, A. G. and GILLS, B. K. 1993a and b, "The 5000-year world system: an interdisciplinary introduction" and "Rejoinder and conclusions," in A. G. Frank and B. K. Gills (eds.), *The World System: Five Hundred Years or Five Thousand?*, London and New York: Routledge, pp. 3–55 and 297–307.
- (eds.), 1993c, *The World System: Five Hundred Years or Five Thousand?*, London and New York: Routledge.
- 2000, "The five thousand year world system in theory and praxis," in R. A. Denemark, J. Friedman, B. K. Gills, and G. Modelski (eds.), *World System History: The Social Science of Long-Term Change*, London: New York, Routledge, pp. 3–23.
- FREEMAN-GRENVILLE, G. S. P., 1962a and 1975, *The East African Coast: Select Documents from the First to the Earlier Nineteenth Century*, 1st and 2nd edns., Oxford: Clarendon Press.
- 1962b, *The Medieval History of the Coast of Tanganyika*, London and New York: Oxford University Press.
- 1980, *The Book of the Wonders of India*, London: East–West Publications.
- 1981, "Kilwa," in C. E. Bosworth and E. van Donzel (eds.), *Encyclopaedia of Islam*, 2nd edn., vol. v, Leiden: E. J. Brill, pp. 106–107.
- 1993, "Nawrûz," in C. E. Bosworth *et al.* (eds.), *Encyclopédie de l'Islam*, vol. VII, Leiden: E. J. Brill, pp. 1049–1050.
- FREEMAN-GRENVILLE, G. S. P. (and FERRAND, G.), 1998, "Sofala," in C. E. Bosworth, E. van Donzel, W. P. Heinrichs, and G. Lecomte (eds.), *Encyclopédie de l'Islam*, 2nd edn., vol. IX, Leiden: E. J. Brill, pp. 727–731.
- FRIEDMAN, J., 1993, "Comments" on A. G. Frank's article "Bronze Age world system cycles," *Current Anthropology*, 34 (4), pp. 409–410.
- 1994, *Cultural Identity and Global Process*, London: Sage.
- 2000, "Concretizing the continuity argument in global systems analysis," in R. A. Denemark, J. Friedman, B. K. Gills, and G. Modelski (eds.), *World System History: The social science of long-term change*, London and New York: Routledge, pp. 133–152.
- 2005, "Plus ça change? On not learning from history," in J. Friedman and C. Chase-Dunn (eds.), *Hegemonic Declines: Present and Past*, Boulder, CO: Paradigm Press, pp. 89–114.
- FRIEDMAN, J. and CHASE-DUNN, C. (eds), 2005, *Hegemonic Declines: Past and Present*, Boulder, CO: Paradigm Press.
- FRIEDMAN, J. and EKHOLM FRIEDMAN, K., 2011, *Historical Transformations: The Anthropology of Global Systems*, Walnut Creek, CA: Altamira Press.
- FRIEDMAN, J. and ROWLANDS, M., 1977, *The Evolution of Social Systems*, London and New York: Duckworth.
- FROBERVILLE, B. H. de, 1963, *Le grand dictionnaire de Madagascar*, ed. F. Ranaivo and J. Valette, in *Bulletin de Madagascar*, 204, pp. 114–286.
- FU'AD-SAYYED, A. and GAYRAUD, R.-P., 2000, "Fustat-Le Caire à l'époque fatimide," in J.-C. Garcin (ed.), *Grandes villes méditerranéennes du monde musulman médiéval*, École Française de Rome, pp. 135–156.
- FULLER, D. Q., 2006, "Agricultural origins and frontiers in South Asia: a working synthesis," *Journal of World Prehistory*, 20, pp. 1–86.
- FUSON, R. H., 1997, "The Columbian voyages," in F. L. Allen (ed.), *North American Exploration*, vol. 1: *A New World is Disclosed*, University of Nebraska Press, pp. 127–188.
- GABORIEAU, M., 1995a, "L'Islamisation de l'Inde et de l'Asie orientale," in J. C. Garcin *et al.* (eds.), *États, sociétés et cultures du monde musulman médiéval*, vol. 1, Paris: PUF, pp. 431–459.

- 1995b, "Le culte des saints musulmans en Inde," in H. Chambert-Loir and C. Guillot (eds.), *Le culte des saints dans le monde musulman*, Paris: Ecole française d'Extrême-Orient, pp. 197–210.
- GALLAND, A. (trans.), 1965, *Les Mille et Une Nuits*, 3 vols., Paris: Garnier-Flammarion (1st edn. 1704–1717).
- GARCIN, J.-C., 1976, *Un centre musulman de la Haute-Égypte médiévale: Qūs*, Cairo: Institut Français d'Archéologie Orientale.
- 1995a and b, "Les Seldjukides et leurs héritiers," and "Le Proche-Orient à l'époque mamluke," in J. C. Garcin et al. (eds.), *États, sociétés et cultures du monde musulman médiéval*, vol. 1, Paris: PUF, pp. 123–149 and pp. 343–370.
- 2000, "La ville et ses réseaux lointains," in : *Grandes villes méditerranéennes du monde musulman médiéval*, J.-C. Garcin (ed.), École Française de Rome, pp. 301–304.
- GARCIN, J.-C. et al. (eds.), 1995, 2000a, and 2000b, *États, sociétés et cultures du monde musulman médiéval, Xe–XVe siècles*, 3 vols., Paris: PUF.
- GARLAKE, P. S., 1966, *The Early Islamic Architecture of the East African Coast*, Nairobi and London: Oxford University Press.
- 1978, "Pastoralism and Zimbabwe," *Journal of African History*, 19 (4), pp. 479–493.
- GARNSEY, P. and SALLER, R., *L'empire romain. Économie, société, culture*, Paris: La Découverte (1st edn. 1987).
- GASCHE, H., ARMSTRONG, J. A., COLE, S. W., and GURZADYAN, V. G., 1998, *Dating the Fall of Babylon: A Reappraisal of Second-Millennium Chronology*, Mesopotamian History and Environment, Series II, Memoirs IV, University of Ghent and the Oriental Institute of the University of Chicago.
- GATES, H., 1996, *China's Motor: A Thousand Years of Petty Capitalism*, Ithaca, NY: Cornell University Press.
- GAUDEBOUT, P. and MOLET, L., 1957, "Coutumes et textes tañala," *Mémoires de l'Institut Scientifique de Madagascar*, série C, 4, pp. 35–96.
- GAUDEBOUT, P. and VERNIER, E., 1941a, "Notes à la suite d'une enquête sur les objets en pierre de la région de Vohémar," *Bulletin de l'Académie Malgache*, 24, pp. 92–99.
- 1941b, "Notes sur une campagne de fouilles à Vohémar. Mission Rasikajy 1941," *Bulletin de l'Académie Malgache*, 24, pp. 100–114.
- GAUDEFROY-DEMOMBYNES, M., 1969, *Mahomet*, Paris: Albin Michel.
- GAUTIER DALCHÉ, P., 2009, *La Géographie de Ptolémée en Occident (IVe–XVIe siècles)*, Turnhout: Brepols.
- GEERTZ, C., 1960, *The Religion of Java*, Glencoe, ILL: Free Press.
- 1966, *Person, Time, and Conduct in Bali: An Essay in Cultural Analysis*, Southeast Asia Program, Cultural Report Series, New Haven, CT: Yale University.
- GENET, J.-P., 2009, "France, Angleterre, Pays-Bas: l'état moderne," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 135–153.
- GEOFFROY, E., 1995, "Le culte des saints musulmans au Proche-Orient," in H. Chambert-Loir and C. Guillot (eds.), *Le culte des saints dans le monde musulman*, Paris: École française d'Extrême-Orient, pp. 33–56.
- GERNET, J., 1999, *Le monde chinois*, 2nd edn., Paris: Armand Colin (1st edn. 1972).
- 2002, *A History of Chinese Civilization*, 2nd edn., London: Folio Society (first published by Cambridge University Press, 1996).
- GEVREY, A., 1870, *Essai sur les Comores*, Pondicherry: A. Saligny.
- GIL, M., 2003, "The Jewish merchants in the light of eleventh-century Geniza documents," *Journal of the Economic and Social History of the Orient*, 46 (3), pp. 273–319.
- GILLS, B. K., 1993, "Hegemonic transitions in the World System," in A. G. Frank and B. K. Gills (eds.), *The World System: Five Hundred Years or Five Thousand?*, London and New York: Routledge, pp. 115–140.

- 1995, "Capital and power in the processes of world history," in S. K. Sanderson (ed.), *Civilizations and World Systems: Studying World-Historical Change*, Walnut Creek, CA: Altamira Press, pp. 136–162.
- GILLS, B. K. and FRANK, A. G., 1993 a and b, "The cumulation of accumulation" and "World System cycles, crises, and hegemonic shifts, 1700 BC to 1700 AD," in A. G. Frank and B. K. Gills (eds.), *The World System: Five Hundred Years or Five Thousand?*, London and New York: Routledge, pp. 81–114 and 143–199.
- GIPOULOUX, F., 2009, *La Méditerranée asiatique: villes portuaires et réseaux marchands en Chine, au Japon et en Asie du Sud-Est, XVIe–XXIe siècle*, Paris: CNRS Éditions.
- GIRALT ROMEU, S., JULIA BRUGUES, R., KLERKX, J., DE BATIST, M., BECK, C., BOBROV, V., BUCHACA, T., GAVSHIN, V., KALUGIN, I., KIPFER, R., LEROY, S., LIGNIER, V., LOMBARDI, S., MATYCHENKOV, V., PEETERS, F., PODSETCHINE, V., RIERA, S., ROMANOVSKY, V., SUKHORUKOV, F., and VOLTATTORNI, N., 2004, "1,000-years of environmental history of Lake Issyk-Kul," in J. C. J. Nihoul, P. O. Zavalov, and P. P. Micklin (eds.), *Dying and Dead Seas: Climatic Versus Anthropic Causes*, NATO ASI series, IV, Earth and Environmental Sciences 36, Amsterdam: Kluwer Academic, pp. 228–253.
- GLOVER, I. C., 1996, "The archaeological evidence for early trade between South and Southeast Asia," in J. Reade (ed.), *The Indian Ocean in Antiquity*, London and New York: Kegan Paul, pp. 365–402.
- 2002, "West Asian Sassanian-Islamic Ceramics in the Indian Ocean, South, Southeast and East Asia," *Man and Environment*, 27 (1), pp. 165–177.
- GODLEY, D., 1997, "Flood regimes in northern Thailand," MA thesis, Monash University.
- GOITEIN, S. D., 1954a, "From the Mediterranean to India: documents on the trade to India, South Arabia, and East Africa from the eleventh and twelfth centuries," *Speculum. A Journal of Mediaeval Studies*, 29, 2 (1), pp. 181–197.
- 1954b, "Two eye witness reports on the invasion of Aden by Kais in the twelfth century," *Bulletin of the School of Oriental and African Studies*, 16, pp. 247–257.
- 1966, *Studies in Islamic History and Institutions*, Leiden: Brill.
- 1967–1993, *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*, Berkeley, Los Angeles, and London: University of California Press, 6 vols. (vol. VI with P. Sanders).
- 1973, *Letters of Medieval Jewish Traders*, Princeton University Press.
- 1980, "From Aden to India: specimens of the correspondence of India traders of the twelfth century," *Journal of the Economic and Social History of the Orient*, 23, pp. 43–66.
- 1987, "Portrait of a medieval India three letters from the Cairo Geniza," *Bulletin of the School of Oriental and African Studies*, 50, pp. 449–464.
- GOITEIN, S. D., and FRIEDMAN, M. A., 2007, *India Traders of the Middle Ages: Documents from the Cairo Geniza. "India Book" Part One*, Leiden: Brill.
- GOLDBERG, E., 1991, "Was there an Islamic 'City'?", in R. Kasaba (ed.), *Cities in the World System*, Westport, CT: Greenwood Press, pp. 3–16.
- GOLDEN, P. B., 2005, "The Turks: a historical overview," in D. J. Roxburgh (ed.), *Turks: A Journey of a Thousand Years, 600–1600*, London: Royal Academy of Arts, pp. 18–31.
- GOLDSTONE, J. A., 1991, *Revolution and Rebellion in the Early Modern World*, Berkeley and Los Angeles: University of California Press.
- 2002, "Efflorescences and economic growth in world history: rethinking the 'Rise of the West' and the Industrial Revolution," *Journal of World History*, 13 (2), pp. 323–389.
- 2008, *Why Europe? The Rise of the West in World History 1500–1850*, Boston, MA: McGraw Hill Higher Education.

- 2009, "Efflorescences et croissance économique dans l'histoire globale: une réinterprétation de l'essor de l'Occident et de la Révolution Industrielle," in P. Beaujard, L. Berger, and P. Norel (eds.), *Histoire globale, mondialisations et capitalisme*, Paris: La Découverte, pp. 299–334.
- GOMMANS, J., 1998, "The silent frontier of South Asia, c. AD 1100–1800," *Journal of World History*, 9 (1), pp. 1–23.
- GONDA, J., 1973, *Sanskrit in Indonesia*, New Delhi: International Academy of Indian Culture (1st edn. 1952).
- GONDONNEAU, A. and GUERRA, M. F., 2002, "The circulation of precious metals in the Arab Empire: the case of the Near and Middle East," *Archaeometry*, 44, pp. 573–600.
- GONG, G. F. and HAMEED, S., 1991, "The variation on moisture conditions in China during the last 2000 years," *International Journal of Climatology*, 11, pp. 271–283.
- GONNEAU, P., 2009, "De Constantinople à Moscou: le nouvel empire," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 175–191.
- GOODMAN, S. M., 2013, "The history of mammal introductions to islands in the western Indian Ocean," paper presented at the Sealinks Conference "Proto-Globalisation in the Indian Ocean World: Multidisciplinary Perspectives on Early Globalisation," Oxford, Jesus College, November 7–10, 2013.
- GOODY, J., 1996, *The East in the West*, Cambridge University Press.
- 1999, *L'Orient en Occident*, Paris: Seuil.
- 2007, *The Theft of History*, Cambridge University Press.
- GORDON, S., 2008, *When Asia was the world*, Philadelphia, PA: Da Capo Press.
- GORIS, P., 1960a and b, "The religious character of the village community" and "Holidays and Holy Days," in J. L. Swellengrebel et al. (eds.), *Bali: Studies in Life, Thought and Ritual*, The Hague and Bandung: W. Van Hoeve, pp. 77–100 and 113–129 (1st edn. 1933).
- GOUCHER, C., LEGUIN, C., and WALTON, L., 1998, *In the Balance: Themes in Global History*, Boston, MA: McGraw-Hill.
- GOURJON, G., BOETSCH, G., and DEGIOANNI, A., 2011, "Gender and population history: sex bias revealed by studying genetic admixture of Ngazidja population (Comoro Archipelago)," *American Journal of Physical Anthropology*, 144, pp. 653–660.
- GOUROU, P., 1936, *Les paysans du delta tonkinois, étude de géographie humaine*, Paris: Les Éditions d'Art et d'Histoire.
- 1984, *Riz et civilisation*, Paris: Fayard.
- GRAEBER, D., 2005, "La démocratie des interstices. Que reste-t-il de l'idéal démocratique?," *Revue du Mauss*, 26, pp. 41–89.
- GRAEFE, E. and MACDONALD, D. B., 1961, "Djadwal," in B. Lewis, C. Pellat, and J. Schacht (eds.), *Encyclopédie de l'islam, Nouvelle Edition*, vol. II, Leiden: Brill; Paris: Maisonneuve, pp. 379–380.
- GRANBERRY, J., 2005, *The Americas that Might Have Been: Native American Social Systems through Time*, Tuscaloosa: University of Alabama Press.
- GRANDIDIER, A., 1892, *Histoire de la géographie de Madagascar*, Paris: Imprimerie Nationale (1st edn., 1885).
- GRANDIDIER, A., CHARLES-ROUX, J., DELHORBE, C., FROIDEVAUX, H., and GRANDIDIER, G. (eds.), 1903, 1904, 1905, 1906, 1907, 1910, 1913, *Collection des Ouvrages Anciens Concernant Madagascar (COACM)*, vol. I, 1500–1613; vol. II, 1613–1640; vol. III, 1640–1716; vol. IV, 1701–1720; vol. V, 1718–1800; vol. VI, supplement 1598–1741; vol. VII, 1604–1658. Paris: Comité de Madagascar et Union Coloniale.
- GRANDIDIER, A. and GRANDIDIER, G., 1908, 1928, *Histoire physique, naturelle and politique de Madagascar*, vol. IV: *Ethnographie de Madagascar*, book 1: *Les habitants de Madagascar*, book 4: *Agriculture, forêts, élevage, industrie et commerce, travaux publics et moyens de transport*,

- éducation, médecine*, Paris: Imprimerie Nationale, Hachette, Société d'Éditions Géographiques, Maritimes et Coloniales.
- GRANDIDIER, G., 1905, "Les animaux disparus de Madagascar," *Revue de Madagascar*, August, pp. III–128.
- GRATALOUP, C., 2010, *Géohistoire de la mondialisation: le temps long du monde*, 2nd edn., Paris: Armand Colin.
- 2011, *Faut-il penser autrement l'histoire du monde ?*, Paris: Armand Colin.
- 2015, *Introduction à la géohistoire*, Paris: Armand Colin.
- GRATUZE, B., LANKTON, J., PION, C., POULAIN, D., SCUILLER, C., and SODE, T., 2013, "South Asian glass beads in western Europe in the Early Middle Ages (5th–8th centuries CE)," paper presented at the Sealinks Conference "Proto-Globalisation in the Indian Ocean World. Multidisciplinary perspectives on early globalisation," Oxford, Jesus College, November 7–10, 2013.
- GRAY: see PYRARD DE LAVAL
- GREEN, M., 2013, "From enzootics to pandemics: African and Asian origins of disease before 1000 CE," Paper presented at the Sealinks Conference "Proto-Globalisation in the Indian Ocean World. Multidisciplinary perspectives on early globalisation," Oxford, Jesus College, November 7–10, 2013.
- GRÉVIN, B., 2009, "La lente révolution des cultures linguistiques," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 651–667.
- GRIFFIN, W. D., 2009, "The Matitanana Archaeological Project: culture history and social complexity in the Seven Rivers region of southeastern Madagascar," Ph.D. dissertation, University of Michigan.
- GROSSET-GRANGE, H., 1978, "La côte africaine dans les routiers nautiques arabes au moment des grandes découvertes," *Azania*, 13, pp. 1–35.
- GROVE, J. M., 2002, "Climatic change in northern Europe over the last two thousand years and its possible influence on human activity," in G. Wefer, W. H. Berger, K.-E. Behre, and E. Jansen (eds.), *Climate Development and History of the North Atlantic Realm*, Berlin, Heidelberg, and New York: Springer, pp. 313–326.
- GROVE, R. H. and CHAPPELL, J., 2000, "El Niño chronology and the history of global crises during the Little Ice Age," in R. H. Grove and J. Chappell (eds.), *El Niño: History and Crisis*, Cambridge: The White Horse Press, pp. 5–34.
- GRUZINSKI, S., 2010, "La mondialisation a commencé," *L'Histoire*, 355, pp. 102–108.
- GRYNÆUS, S., 1532, *Novus Orbis Regionum ac Insularum Veteribus Incognitarum*, Basel: Iohannes Hervagius.
- GUÉRY, A., 2004, "L'esclavage, une rationalisation économique de la domination?," in H. Bruhns and J. Andreau (eds.), *Sociologie économique et économie de l'Antiquité. À propos de Max Weber*, *Cahiers du Centre de recherches historiques*, 34, October, pp. 155–158.
- GUEUNIER, N., 1992, "Les routes maritimes du canal de Mozambique d'après les routiers arabo-swahili," with J.-C. HÉBERT and F. VIRÉ, *Taloha*, 11, pp. 77–120.
- GUICHARD, P., 2000, "Mise en valeur du sol et production: de la 'révolution agricole' aux difficultés du bas Moyen Âge," in J. C. Garcin et al. (eds.), *États, sociétés et cultures du monde musulman médiéval*, vol. II, Paris: PUF, pp. 175–198.
- GUILLAIN, C., 1845, *Documents sur l'histoire, la géographie et le commerce de l'Afrique orientale*, Paris: A. Bertrand, 3 vols.
- GUILLOT, C. (ed.), 1998, 2003, *Histoire de Barus (Sumatra). Le site de Lobu Tua*, vol. 1: *Études et documents*, vol. II: *Étude archéologique et documents*, Cahier d'archipel 30, Paris: Association Archipel.
- 2004, "La Perse et le Monde malais: échanges commerciaux et intellectuels," *Archipel*, 68, pp. 159–192.

- GUILLOT, C., LOMBARD, D., and PTAK, R. (eds.), 1998, *From the Mediterranean to the China Sea: Miscellaneous Notes*, Wiesbaden: Harrassowitz.
- GUILLOT, C., NURHAKIM, L., and WIBISONO, S., 1994, *Banten avant l'Islam: étude archéologique de Banten Girang (932[?]–1526)*, Monographies 173, Paris: École française d'Extrême-Orient.
- GUNAWARDANA, R. A. L. H. and SAKURAI, Y., 1981, "Sri Lankan ships in China: a note on a passage in a Chinese literary work from the period of the Tang Empire," *The Sri Lanka Journal of Humanities*, 7, Colombo, pp. 148–152.
- GUPTA, A. K., DAS, M., and ANDERSON, D. M., 2005, "Solar influence on the Indian summer monsoon during the Holocene," *Geophysical Research Letters*, 32, L17703, doi:10.1029/2005GL022685.
- GURRIA, A. (ed.), 2008, *Perspectives de l'environnement de l'OCDE à l'horizon 2030*, Paris: OCDE.
- GUTHRIE, M., 1967–1972, *Comparative Bantu*, 4 vols., Farnborough: Gregg International.
- GUTMAN, P. and HUDSON, B., 2004, "The archaeology of Burma (Myanmar) from the Neolithic to Pagan," in I. Glover and P. Bellwood (eds.), *Southeast Asia: From Prehistory to History*, Abingdon and New York: Routledge/Curzon, pp. 149–176.
- GUY, J., 2010, "Rare and strange goods: international trade in ninth-century China," in R. Krah, J. Guy, J. K. Wilson, and J. Raby (eds.), *Shipwrecked Tang Treasures and Monsoon Winds*, Washington, DC, and Singapore: Arthur M. Sackler Gallery, The Smithsonian's Museum of Asian Art, National Heritage Board, Singapore, and Singapore Tourism Board, pp. 19–27.
- HAALAND, R., 1995/1996, "Dakawa: an early Iron Age site in the Tanzania hinterland," *Azania*, 29–30, pp. 238–247.
- HAARMANN, U., 1993, "Miṣr," in C. E. Bosworth *et al.* (eds.), *Encyclopédie de l'Islam*, vol. VII, Leiden: Brill; Paris: Maisonneuve and Larose, pp. 166–179.
- HABIB, I., 1980, "Changes in technology in medieval India," *Studies in History*, 2 (1), pp. 15–39.
- 1982a and b, "Agrarian economy" and "Non-agricultural production and urban economy," in T. Raychaudhuri and I. Habib (eds.), *The Cambridge Economic History of India*, vol. 1: c. 1200–c. 1750, Cambridge University Press, pp. 48–76, and 76–93.
- 1985, "Medieval technology exchanges between India and the Islamic world," *Aligarh Journal of Oriental Studies, Professor Ram Suresh Tripathi Commemoration*, vol. 11 (1–2), Aligarh: Viveka Publications, pp. 213–215.
- 1990, "Merchant communities in precolonial India," in J. D. Tracy (ed.), *The Rise of Merchant Empires: Long-Distance Trade in the Early Modern World, 1350–1750*, Cambridge University Press, pp. 371–399.
- 1994, "The price regulations of 'Ala'uddin Khalji – a defence of Zia' Barani," in S. Subrahmanyam (ed.), *Money and the Market in India 1100–1700*, Delhi: Oxford University Press, pp. 85–111.
- HAIDER, N., 2007, "The network of monetary exchange in the Indian Ocean trade, 1200–1700," in H. P. Ray and E. A. Alpers (eds.), *Cross Currents and Community Networks: The History of the Indian Ocean World*, New Delhi: Oxford University Press, pp. 181–205.
- HALL, D. G. E., 1981, *A History of Southeast Asia*, 4th edn., London: Palgrave Macmillan (1st edn. 1955).
- HALL, K. R., 1978, "International trade and foreign diplomacy in early South India," *Journal of the Economic and Social History of the Orient*, 21 (1), pp. 75–98.
- 1980, *Trade and Statecraft in the Age of the Colas*, Delhi: Oxford University Press.
- 1985, *Maritime Trade and State Development in Early Southeast Asia*, Honolulu: University of Hawai'i Press.
- 1992, "Economic history of early Southeast Asia," in N. Tarling (ed.), *The Cambridge History of Southeast Asia*, vol. 1, part 1: *From Early Times to c. 1500*, Cambridge University Press, pp. 183–275.

- 1994, "Price making and market hierarchy in early medieval South India," in S. Subrahmanyam (ed.), *Money and the Market in India 1100–1700*, Delhi: Oxford University Press, pp. 57–84 (1st edn. 1977).
- 1996, "The Southeast Asian textile trade, 1400–1800," *Journal of the Economic and Social History of the Orient*, 39 (2), pp. 87–135.
- 2001a andb, "Structural change and societal integration in early South India: an introductory essay" and "Merchants, rulers, and priests in an early South Indian sacred centre: Cidambaram in the age of the Cōlas," in K. R. Hall (ed.), *Structure and Society in Early South Asia: Essays in Honour of Naboru Karashima*, London, Routledge, pp. 85–116.
- 2001c, "Upstream and downstream unification in Southeast Asia's first Islamic polity: the changing sense of community in the fifteenth century *Hikayat Raja-raja Pasai* court chronicle," *Journal of the Economic and Social History of the Orient*, 44 (2), pp. 198–229.
- 2011, *A History of Early Southeast Asia: Maritime Trade and Societal Development, 100–1500*, Lanham, MD: Rowman and Littlefield.
- HALL, K. R. and SPENCER, G., 1980, "The economy of Kancipuram," *Journal of Urban History*, 6 (2), pp. 127–151.
- HALL, T. D., 1989, *Social Change in the Southwest, 1350–1880*, Lawrence: University Press of Kansas.
- 2006, "[Re]peripheralization, [re]incorporation, frontiers and non-state societies. Continuities and discontinuities in globalizing processes" in B. K. Gills and W. R. Thompson (eds.), *Globalization and Global History*, London: Routledge, pp. 96–113.
- HAMÈS, C., 1997, "L'art talismanique en Islam d'Afrique Occidentale. Personnes, Supports, Procédés, Transmission," Ph.D. thesis, Paris, École Pratique des Hautes Études.
- (ed.), 2007, *Coran et talismans: usages magiques et onirocritiques des écrits islamiques*, Paris: Karthala.
- HAMIDULLAH, M., 1974, "Les escales arabes au début de l'Islam," in J. Pirenne (ed.), *Les grandes escales*, part 1: *Antiquité et Moyen-Âge (10e colloque d'Histoire Maritime)*, Brussels: Editions de la Librairie Encyclopédique, pp. 191–206.
- HAMONIC, G., 1988, "Les réseaux marchands bugis-makassar: grandeur et décadence du principe de la liberté des mers," in D. Lombard and J. Aubin (eds.), *Marchands et hommes d'affaires asiatiques dans l'océan Indien et la mer de Chine: 13e–20e siècles*, Paris: EHESS, pp. 253–266.
- HANISCH, E. O. M., 1981, "Schroda: a Zhizo site in Northern Transvaal," in E. A. Voigt (ed.), *A Guide to Archaeological Sites in Northern and Eastern Transvaal*, Pretoria: Transvaal Museum, pp. 37–53.
- HANNAN, M., 1987, *Standard Shona Dictionary*, Harare and Bulawayo: College Press (1st edn. 1957).
- HANSEN, M. H., 2000a, "The concepts of city-state and city-state culture," in M. H. Hansen (ed.), *A Comparative Study of Thirty City-State Cultures*, Copenhagen: Det Kongelige Danske Videnskabernes Selskab, pp. 11–34.
- 2000b, "The Hellenic polis," in M. H. Hansen (ed.), *A Comparative Study of Thirty City-State Cultures*, Copenhagen: Det Kongelige Danske Videnskabernes Selskab, pp. 141–188.
- 2000c, "Conclusion: the impact of city-state cultures on world history," in M. H. Hansen (ed.), *A Comparative Study of Thirty City-State Cultures*, Copenhagen: Det Kongelige Danske Videnskabernes Selskab, pp. 597–623.
- 2002, "Introduction," in M. H. Hansen (ed.), *A Comparative Study of Six City-State Cultures*, Copenhagen: Det Kongelige Danske Videnskabernes Selskab, pp. 7–21.
- HARBOUN, H., 1986, *Benjamin de Tudèle, voyage autour du monde, 1173*, Aix-en-Provence: Massoreth.
- HARDY-GUILBERT, C., 2001, "Shihr, porte du Hadramaout," *Dossiers d'Archéologie*, 263, "Yémen," pp. 82–86.

- 2010, "Chihr de l'encens (Yemen)," *Arabian Archaeology and Epigraphy*, 21 (1), pp. 46–70.
- AL-HARIRI, 1898, *The Assemblies of Al Hariri*, trans. F. Steingass, London: Royal Asiatic Society.
- HARLEY, J. B. and WOODWARD, D. (eds.), 1992, 1994, *The History of Cartography*, vol. 11, book 1: *Cartography in the Traditional Islamic and South Asian Societies*; vol. 11, book 2: *Cartography in the Traditional East and Southeast Asian Societies*, University of Chicago Press.
- HARTWELL, R., 1963, "Iron and Early Industrialism in eleventh-century China," Ph.D. thesis, University of Chicago.
- HASAN, H., 1928, *A History of Persian Navigation*, London: Methuen.
- HASSAN (AL-), A. Y. and HILL, D. R., 1991, *Sciences et techniques en Islam: une histoire illustrée*, Paris: EDIFRA/UNESCO.
- HASSAN, F. A., 1981, "Historical Nile floods and their implications for climatic change," *Science*, 212 (4499), pp. 1142–1145.
- 2007, "Extreme Nile floods and famines in Medieval Egypt (AD 930–1500) and their climatic implications," *Quaternary International*, 173–174, pp. 101–112.
- 2011, "Nile flood discharge during the Medieval Climate Anomaly," www.pages-igbp.org/products/newsletters/ref2011_1.html
- HAWKES, J. and WYNNE-JONES, S., 2015, "India in Africa: trade goods and connections of the late first millennium," *Afriques*, 6, <http://afriques.revues.org>
- HAWKINS, C. W., 1982, *Praus of Indonesia*, London: Nautical Books.
- HAYAMI, A., 1986, "a great transformation: social and economic change in sixteenth and seventeenth century Japan," *Bonner Zeitschrift für Japanologie*, 8, pp. 3–13.
- HÉBERT, J.-C., 1958, "La parenté à plaisanterie à Madagascar: étude d'ethnologie juridique," *Bulletin de Madagascar*, 142, pp. 175–216, and 143, pp. 268–335.
- 1960, 1962, "Les calendriers provinciaux malgaches," *Bulletin de Madagascar*, 172, pp. 809–820, and 191, pp. 339–352.
- 1965a and b, "The cosmologie malgache" and "L'énumération des points cardinaux et l'importance du Nord-Est," *Annales de l'Université de Madagascar, Taloha*, 1, pp. 84–149 and 150–195.
- 1966, "Le comput ancien des années malagasy (Jour de Nouvel An et cycles d'années)," *Bulletin de Madagascar*, 236, pp. 29–62.
- 1968a, "La rose des vents malgache et les points cardinaux," in J. Poirier and S. Rajaona (eds.), *Civilisation malgache* 2, Paris: Cujas; Antananarivo: Faculté des Lettres et Sciences Humaines, pp. 159–205.
- 1968b, "Les calendriers saisonniers à Madagascar," *Bulletin de Madagascar*, 260, pp. 42–85.
- 1978, "Le système monétaire malgache des temps anciens," in J. Poirier and A. Rabenoro (eds.), *Tradition et dynamique sociale à Madagascar*, Université de Nice, Institut d'Études et de Recherches interethniques et interculturelles, pp. 191–274.
- 1980, "Note sur Madagascar (côte Est et Imerina) du traitant Jacques de la Salle, recueillies par d'Unienville en 1816," *Omaly sy Anio (Hier et Aujourd'hui)*, 11, pp. 129–175.
- 1989–1990, "Les marchés des Hautes Terres centrales malgaches avant Andrianampoinimerina," *Omaly sy Anio (Hier et Aujourd'hui)*, 29–32, pp. 71–101.
- 1993–1994, "Les Zavaga ou Zabaga indonésiens (=vazaha), artisans et trafiquants du fer, commerçants ou pirates (?), à Madagascar et aux Comores, aux XIIIe–XIIIe siècles," *Omaly sy Anio (Hier et Aujourd'hui)*, 37–40, pp. 13–62.
- 1995, "Les migrants zafiraminia et leurs bœufs," in *L'Étranger intime: mélanges offerts à Paul Ottino*, Université de la Réunion, Océan Editions, pp. 77–114.
- 1996, "Du nouveau sur les deux vagues d'immigrants islamisés de la côte est malgache, à la lumière des premiers documents portugais," in A. Carénini and J.-P. Jardel (eds.), *De la tradition à la post-modernité. Hommage à Jean Poirier*, Paris: PUF, pp. 191–218.
- 1999, "La découverte et la reconnaissance de Madagascar par les Portugais, d'après de nouveaux documents," *Annuaire des Pays de l'Océan Indien, 1997–1998*, 15, Mélanges en l'honneur du

- doyen Charles Cadoux, Aix-en Provence, Presses Universitaires d'Aix-Marseille, pp. 337–428.
- 2000, "Manga > olomanga, Ramanga, Antemanga > zazamanga, Zafimanga," in C. Allibert and N. Rajaonarimanana (eds.), *L'extraordinaire et le quotidien: variations anthropologiques. Hommage au professeur Pierre Vérin*, Paris: Karthala, pp. 387–421.
- 2001, "Les 'sagaies volantes' d'Andriamanelo et les 'sagaies à pointe d'argile' des Vazimba: un problème de critique de la tradition orale merina," *Études Océan Indien*, 31, "Mare Prasodum, d'une rive à l'autre," pp. 165–189.
- n.d., unpublished, "Les noms vernaculaires des plantes cultivées à Madagascar et leur origine."
- n.d., unpublished, "Le calendrier malgache d'origine sanscrite et le problème du relais indonésien."
- HECK, G. W., 1999, "Gold mining in Arabia and the rise of the Islamic state," *Journal of the Economic and Social History of the Orient*, 42 (3), pp. 364–393.
- HEERS, J., 1961, *Gênes au XVe siècle: activités économiques et problèmes sociaux*, Paris: SEVPEN.
- 2003, *Les négriers en terres d'islam: la première traite des Noirs, VIIe–XVIe siècles*, Paris: Perrin.
- HEESTERMAN, J. C., 1989, "The 'Hindu Frontier'," in J. C. Heesterman, Taufik Abdullah *et al.* (eds.), *India and Indonesia: General Perspectives: Comparative History of India and Indonesia*, vol. IV, Leiden: E. J. Brill, pp. 1–15.
- HEINE-GELDERN, R., 1942, "Conceptions of state and kingship in Southeast Asia," *Far Eastern Quarterly*, 2, pp. 15–30.
- HEITZMAN, J., 1995, "State formation in South India, 850–1280," in H. Kulke (ed.), *The State in India, 1000–1700*, Oxford University Press, pp. 117–156.
- 1997, *Gifts of Power: Lordship in an Early Indian State*, Oxford University Press.
- 2001, "Urbanization and political economy in early South India: Kāñcīpuram during the Cōla period," in K. R. Hall (ed.), *Structure and Society in Early South Asia: Essays in Honour of Naboru Karashima*, London: Routledge, pp. 85–116.
- 2006, *The City in South Asia*, London and New York: Routledge.
- HELM, R. M., 2000, "Conflicting histories: the archaeology of the iron-working, farming communities in the central and southern coast region of Kenya," Ph.D. thesis, University of Bristol.
- HELM, R. M., CROWTHER, A., SHIPTON, C., TENGEZA, A., FULLER, D., and BOIVIN, N., 2012, "Exploring agriculture, interaction and trade on the eastern African littoral: preliminary results from Kenya," *Azania*, "Archaeological research in Africa," 47 (1), pp. 39–63.
- HELMS, M. W., 1988, *Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge, and Geographical Distance*, Princeton University Press.
- 1993, *Craft and the Kingly Ideal: Art, Trade and Power*, Austin: University of Texas Press.
- HENG THIAM SOON, D., 2001, "The trade in lakawood products between South China and the Malay world from the twelfth to fifteenth centuries AD," *Journal of the Southeast Asian Studies*, 32 (2), pp. 133–149.
- HÉRITIER, F., 1973, "La paix et la pluie: rapports d'autorité et rapports au sacré chez les Samo," *L'Homme*, 13 (3), pp. 121–138.
- HERR, M., 1534, *Die neue Welt der Landschaften und Insulen*, Strassburg: Georg Ulrich.
- HEURTEBIZE, G., 1986a, *Histoire des Afomarolaby (Extrême Sud de Madagascar)*, Paris: Centre National de la Recherche Scientifique.
- 1986b, "Les anciennes cultures de l'Androy central," *Taloha*, 10, pp. 174–179.
- HEURTEBIZE, G. and VÉRIN, P., 1974, "La tranovato de l'Anosy, première construction érigée par les Européens à Madagascar," *Taloha*, 6, pp. 117–142.
- HEUSCH, L. de, 1972, *Le roi ivre ou l'origine de l'État: mythes et rites bantous I*, Paris: Gallimard.
- 1987, *Écrits sur la royauté sacrée*, Brussels: Éditions de l'Université de Bruxelles.

- 1997, "The symbolic mechanisms of sacred kingship: rediscovering Frazer," *Journal of the Royal Anthropological Institute*, 3 (2), pp. 213–232.
- HICKS, J., 1973, *A Theory of Economic History*, Oxford University Press.
- HIEBERT, F. T., 1994, *Origins of the Bronze Age Oasis Civilization in Central Asia*, American School of Prehistoric Research Bulletin 42, Cambridge, MA: Peabody Museum of Archaeology and Ethnology, Harvard University.
- HIGHAM, C., 1996, *The Bronze Age of Southeast Asia*, Cambridge University Press.
- 2002, *Early Cultures of Mainland Southeast Asia*, Bangkok: River Books.
- 2014, *Early Mainland Southeast Asia: From First Humans to Angkor*, Bangkok: River Books.
- HINTZE, H., 1991, *Féodalité, capitalisme et état moderne: essais d'histoire sociale comparée choisis et présentés par Hinnerk Bruhns*, Paris: Éditions de la Maison des Sciences de l'Homme.
- HIRSCH, B. and FAUVELLE-AYMAR, F.-X., 2003, "Voyage aux frontières du monde: topologie, narration et jeux de miroir dans la *Ribla* d'Ibn Battûta," *Afrique et histoire*, 1, pp. 75–122.
- 2004, "Cités oubliées: réflexions sur l'histoire urbaine de l'Éthiopie médiévale (XIe–XVIIe siècles)," *Journal des Africanistes*, 74 (1–2), pp. 299–314.
- HIRSCH, B. and POTIN, Y., 2009, "Le continent détourné. Frontières et mobilité des mondes africains," in P. Boucheron (ed.), *Histoire du monde au XVIe siècle*, Paris: Fayard, pp. 93–113.
- HIRTH, F. and ROCKHILL, W. W., 1911, *Chau-Ju-Kua: His Work on the Chinese and Arab Trade in the Twelfth and Thirteenth Centuries, Entitled Chu-fan chi*, St. Petersburg: Printing Office of the Imperial Academy of Sciences.
- HO, C., 1994a, "Problems in the study of Zhejiang green glazed wares with special references to Ko Koh Khao and Laem Pho-Payang, southern Thailand," in C. Ho (ed.), *New Light on Chinese Yue and Longquan Wares*, Centre of Asian Studies, University of Hong Kong, pp. 187–212.
- 1994b, "The significance of West Asian Ceramics in East and Southeast Asia in the 9th–10th century," *Trade Ceramics Studies*, 14, pp. 35–59 (in Japanese).
- 1995, "Turquoise jars and other West Asian Ceramics in China," *Bulletin of the Asia Institute*, 9, pp. 19–39.
- HOBSON, J. M., 2004, *The Eastern Origins of Western Civilisation*, Cambridge University Press.
- HOCART, A. M., 1933, *The Progress of Man*, New York and London: Methuen.
- 2005, *Au commencement était le rite: De l'origine des sociétés humaines*, Preface by Lucien Scubla, Paris: La Découverte-MAUSS.
- HOCHSTETTER, F. VON, 1864–1866, *Reise der Österreichischen Fregatte Novara um die Erde*, 3 vols., Vienna: Kaiserlich-Königliche Hof- und Staatsdruckerei.
- HODGSON, M. G. S., 1954, *The Venture of Islam*, vol. II: *The Expansion of Islam in the Middle Periods*, Chicago University Press.
- 1975, *The Venture of Islam*, vol. III: *The Gunpowder Empires*, Chicago University Press.
- 1993, *Rethinking World History: Essays on Europe, Islam and World History*, introduction by Edmund Burke III, Cambridge University Press.
- HOGENDORN, J. and JOHNSON, M., 1986, *The Shell Money of the Slave Trade*, Cambridge University Press.
- HONEYCHURCH, W. and AMARTUVSHIN, C., 2006, "States on horseback: the rise of Inner Asian confederations and empires," in M. T. Stark (ed.), *Archaeology of Asia*, Malden, MA, and Oxford: Blackwell, pp. 255–278.
- HORNBORG, A. and CRUMLEY, C. (eds.), 2007, *The World System and the Earth System: Global Socioenvironmental Change and Sustainability since the Neolithic*, Walnut Creek, CA: Left Coast Press.
- HORNBORG, A., MCNEILL, J. R., and MARTINEZ-ALIER, J. (eds.), 2007, *Rethinking Environmental History: World-System History and Global Environmental Change*, Lanham, MD: Altamira Press.

- HORNELL, J., 1934, "Indonesian influence on East African culture," *Journal of the Royal Anthropological Institute*, 64, pp. 305–332.
- 1946, *Water Transport: Origins and Early Evolution*. Cambridge University Press.
- HORTON, M. C., 1987, "The Swahili corridor," *Scientific American*, 257 (3), pp. 86–93.
- 1993, "Swahili architecture, space and social structure," in M. Parker Pearson and C. Richards (eds.), *Architecture and Order*, London: Routledge, pp. 147–169.
- 1996, *Shanga: The Archaeology of a Muslim Trading Community on the Coast of East Africa*, London: British Institute in Eastern Africa.
- 2001, "The Islamic conversion of the Swahili coast 750–1500: some archaeological and historical evidence," in B. S. Amoretti (ed.), *Islam in East Africa: New Sources*, Rome: Herder, pp. 449–469.
- 2004, "Artisans, communities, and commodities: medieval exchanges between Northwestern India and East Africa," *Ars Orientalis*, 34, pp. 62–80.
- HORTON, M. and MIDDLETON, J., 2000, *The Swahili, the Social Landscape of a Mercantile Society*, Oxford: Blackwell.
- HOURLANI, G. F. *et al.*, 1995, *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times*, ed. J. Carswell, rev. edn., with contributions from H. Frost, M. Horton, D. King, G. King, P. Morgan, G. Scanlon, and H. Wright, Princeton University Press (1st edn. 1951).
- HOUYUAN LU *et al.*, 2016, "Earliest tea as evidence for one branch of the Silk Road across the Tibetan Plateau," *Scientific Reports*, doi: 10.1038/srep18955, www.nature.com/scientificreports
- HRBEK, I. and EL FASI, M., 1997, "Les étapes du développement de l'islam et de sa diffusion en Afrique," in M. El Fasi and I. Hrbek (eds.), *Histoire générale de l'Afrique*, vol. III: *L'Afrique du VIIe au XIe siècle*, abridged edn., Paris: Présence Africaine/Edicef/UNESCO, pp. 69–94.
- HSIAO-CHIEN Lin, 2015, *Fettering the Stars: Islamic Navigational Knowledge in Ming China*, Tsing Hua University.
- HU, F. S., ITO, E., BROWN, T. A., CURRY, B. B., and ENGSTROM, D. R., 2001, "Pronounced climatic variations in Alaska during the last two millennia," *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 98 (19), pp. 10552–10556.
- HU, F. S., KAUFMAN, D., YONEJI, S., NELSON, D., SHEMAH, A., HUANG, Y., TIAN, J., BOND, G., CLEGG, B., and BROWN, T., 2003, "Cyclic variation and solar forcing of Holocene climate in the Alaskan Subarctic," *Science*, 301 (5641), pp. 1890–1893.
- HUDSON, M., 1996, "The dynamics of privatization, from the Bronze Age to the present," in M. Hudson and B. A. Levine (eds.), *Privatization in the Ancient Near East and Classical World*, Cambridge, MA: Peabody Museum of Archaeology and Ethnology, pp. 33–72.
- 2004a and b, "Introduction: the role of accounting in civilization's economic takeoff" and "The development of money-of-account in Sumer's temples," in M. Hudson and C. Wunsch (eds.), *Creating Economic Order: Record-Keeping, Standardization and the Development of Accounting in the Ancient Near East*, Bethesda, MD: CDL Press, pp. 1–22 and 303–329.
- 2004c, "The archaeology of money: debt versus barter theories of money's origins," in L. R. Wray (ed.), *Credit and State Theories of Money, The Contributions of A. Mitchell Innes*, Cheltenham and Northampton: Edward Elgar, pp. 99–127.
- Hudud al-'Alam*. "Les Régions du Monde." Une géographie persane 372 A.H./982 A.D. (anon.), ed. V. Minorsky, 1937, Oxford University Press.
- HUFF, T. E., 1993, *The Rise of Early Modern Science*, Cambridge University Press.
- HUFFMAN, T. N., 1973, "Test excavations at Makuru, Rhodesia," *Arnoldia*, 5, pp. 1–21.
- 1990, "L'Afrique méridionale au sud du Zambèze," in M. El Fasi and I. Hrbek (eds.), *Histoire générale de l'Afrique*, vol. III: *L'Afrique du VIIe au XIe siècle*, Paris: UNESCO/Nouvelles Éditions Africaines, pp. 709–726.
- 1996, "Archaeological evidence for climatic change during the last 2000 years in southern Africa," *Quaternary International*, 33, pp. 55–60.

- 2000, "Mapungubwe and the origins of the Zimbabwe culture," in *African Naissance: The Limpopo Valley 1000 Years Ago*, M. Leslie and T. Maggs (eds.), Cape Town, South African Archaeological Society, pp. 14–29.
- 2009, "Mapungubwe and Great Zimbabwe: the origin and spread of social complexity in southern Africa," *Journal of Anthropological Archaeology*, 28, pp. 37–54.
- 2010, "State formation in southern Africa: a reply to Kim and Kusimba," *African Archaeological Review*, 27 (1), pp. 1–11.
- HUGGET, J. W., 1988, "Imported grave goods and the early Anglo-Saxon economy," *Medieval Archaeology*, 32, pp. 63–96.
- HUGHES, J. D., 2009, *An Environmental History of the World: Humankind's Changing Role in the Community of Life*, London: Routledge (1st edn. 2001).
- HUNG, H.-C., IIZUKA, Y., BELLWOOD, P., NGUYEN, K. D., BELLINA, B., SILAPANTH, P., DIZON, E., SANTIAGO, R., DATAN, I., and MANTON, J. H., 2007, "Ancient jades map 3,000 years of prehistoric exchange in Southeast Asia," *Proceedings of the National Academy of Sciences (USA)*, 104 (50), pp. 19745–19750.
- HUNWICK, J. O., 1978, "Black Africans in the Islamic world: an under-studied dimension of the Black Diaspora," *Tarikh*, 5 (4), pp. 20–40.
- HURLES, M. E., SYKES, B. C., JOBLING, M. A., and FORSTER, P., 2005, "The dual origin of the Malagasy in Island Southeast Asia and East Africa: evidence from maternal and paternal lineages," *American Society of Human Genetics*, 16, pp. 894–901.
- HURVITZ, D., 1986, "The 'Anjoaty' and embouchures in Madagascar," in C. P. Kottak, J.-A. Rakotoarisoa, A. Southall, and P. Verin (eds.), *Madagascar: Society and History*, Durham, NC: Carolina Academic Press, pp. 107–120.
- IBN BATTŪTA, 1958–1994, *Travels of Ibn Battuta, AD 1325–1354*, trans. H. A. R. Gibb, with revisions and notes, from the Arabic text, ed. C. Defrémery and B. R. Sanguinetti, vol. I (1958); vol. II (1959); vol. III (1971); vol. IV (trans. C. F. Beckingham, 1994), Cambridge University Press for the Hakluyt Society.
- 1982, *Voyages*, vol. II: *De La Mecque aux steppes russes*, vol. III: *Inde, Extrême-Orient, Espagne et Soudan*, Paris: F. Maspéro.
- 2002, *The Travels of Ibn Battuta*, ed. T. Mackintosh-Smith, London: Picador.
- IBN KHURDADBEH, 1865, *Le Livre des Routes et des Provinces*, ed. C. Barbier de Meynard, *Journal Asiatique*, Mars–April and May–June, pp. 227–296 and 446–532.
- IBN ḤAWQAL, 1964, *Configuration de la terre (Kitāb Ṣūrat al-'Ard)*, trans. J.-H. Kramers and G. Wiet, Beirut: Commission Internationale pour la traduction des chefs-d'oeuvre.
- IBN AL-MUĠĀWIR, 1951, *Ṣifat bilād al-Yaman wa-Makka wa-ba'd al-Ḥiğāz al-musammā Ta'riḥ al-mustabṣir*, ed. O. Löfgren, Leyden: Brill. English trans. G. R. Smith: *A Traveller in Thirteenth Century Arabia. Ibn al-Mujāwir Ta'riḥ al-Mustabṣir*, London, The Hakluyt Society, 2007.
- INALCIK, H., 1969, "Capital formation in the Ottoman Empire," *Journal of Economic History*, 29 (1), pp. 97–140.
- 1978, *The Ottoman Empire: Conquest, Organization and Economy. Collected Studies*, London: Variorum.
- INALCIK, H. and QUATAERT, D., 1994, *An Economic and Social History of the Ottoman Empire*, Cambridge University Press.
- INDRAWOOTH, P., 2004, "The archaeology of the early Buddhist kingdoms of Thailand," in I. Glover and P. Bellwood (eds.), *Southeast Asia: From Prehistory to History*, Abingdon and New York, Routledge/Curzon, pp. 120–146.
- INGRAMS, W. H., 1967, *Zanzibar: Its History and Its People*, London: Frank Cass.
- INIESTA, F., 1993, *Bajo la cruz del Sur: religión, comercio y guerra en el Canal de Mozambique (900–a 1700 D.C.)*, Barcelona: Sendai.

- INOUE, H., ÁLVAREZ, A., LAWRENCE, K., ROBERTS, A., ANDERSON, E. N., and CHASE-DUNN, C., 2012, "Polity scale shifts in world-systems since the Bronze Age: a comparative inventory of upsweeps and collapses," *International Journal of Comparative Sociology*, <http://cos.sagepub.com/content/53/3/210.full.pdf+html>
- INSOLL, T., 1999, *The Archaeology of Islam*, Oxford: Blackwell.
- 2003, *The Archaeology of Islam in Sub-Saharan Africa*, Cambridge University Press.
- JACOB, M., 1997, *Scientific Culture and the Making of the Industrial West*, Oxford University Press.
- JACOB of ANCÔNA, 1997, *The City of Light*, ed. D. Selbourne, London: Little, Brown and Co.
- JACOMY, B., 1990, *Une histoire des techniques*, Paris: Seuil.
- JACQ-HERGOUALC'H, M., 1992a, *La civilisation des ports entrepôts du Sud Kedah (Malaisie), Ve-XIVe siècles*, Paris: L'Harmattan.
- 1992b, "Un exemple de civilisation de ports-entrepôts des Mers du Sud: le Sud Kedah (Malaisie) ve-xive siècles," *Arts Asiatiques*, 47, pp. 40-48.
- 2002, *The Malay Peninsula: Crossroads of the Maritime Silkroad (100 BC-AD 1300)*, Leiden: Brill.
- JACQ-HERGOUALC'H, M., SRISUCHAT, T., SUPAJANYA, T., and KRISANAPOL, W., 1996, "La région de Nakhon Si Thammarat (Thaïlande péninsulaire) du ve au xive siècle," *Journal Asiatique*, 284 (2), pp. 361-435.
- JACQ-HERGOUALC'H, M., SUPAJANYA, T., and KRISANAPOL, W., 1998, "Une étape maritime de la route de la soie. La partie méridionale de l'isthme de Kra au ix^e siècle," *Journal Asiatique*, 286 (1), pp. 235-320.
- JAIN, V. K., 1990, *Trade and Traders in Western India (AD 1000-1300)*, New Delhi: Munshiram Manoharlal Publishers.
- 2001, "Trading community and merchant corporations," in R. Chakravarti (ed.), *Trade in Early India*, Oxford University Press, pp. 344-369 (first published in Jain 1990, pp. 209-232).
- JASPERS, K., 1953, *The Origins and Goal of History*, London: Routledge and Keagan Paul (1st edn. 1949).
- JENNINGS, J., 2011, *Globalizations and the Ancient World*, Cambridge University Press.
- JIANG, J., MENDELSSOHN, R., SCHWING, F., and FRAEDRICH, K., 2002, "Coherency detection of multiscale abrupt changes in historic Nile floods level," *Geophysical Research Letters*, 29 (8), doi: 10.129/2002GLOI4826.
- JOANNÈS, F., 1999, "Structures et opérations commerciales en Babylonie à l'époque néo-babylonienne," in J. G. Dercksen (ed.), *Trade and Finance in Ancient Mesopotamia: Proceedings of the First Mos Symposium, Leiden 1997* (Mos Studies 1), Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul, pp. 175-194.
- 2005, "L'argent des dieux babyloniens," *Topoi. Orient-Occident*, 12-13 (1), pp. 35-53.
- JOHNS, A. H., 1961, "The role of Sufism in the spread of Islam to Malaya and Indonesia," *Journal of the Pakistan Historical Society*, 9 (3), pp. 143-160.
- JOHNS, A. M., 1964, "The role of structural organisation and myth in Javanese historiography," *Journal of Asian Studies*, 24, pp. 91-99.
- JOHNS, J. and SAVAGE-SMITH, E., 2003, "The book of curiosities: a newly discovered series of Islamic maps," *Imago Mundi*, 55, pp. 7-24.
- JONES, E., 1988, *Growth Recurring: Economic Change in World History*, Oxford: Clarendon Press.
- 1996a and b, "Extensive growth in the premodern world" and "Recurrent transitions to intensive growths," in J. Goudsblom, E. Jones, and S. Mennell (eds.), *The Course of Human History: Economic Growth, Social Process, and Civilization*, Armonk and London: M. E. Sharpe, pp. 63-81 and 83-99.
- JONES, P. D. and MANN, M. E., 2004, "Climate over past millennia," *Review of Geophysics*, 42 (2), pp. 1-42.

- JONES, P. D., OSBORN, T. J., and BRIFFA, K. R., 2001, "The evolution of climate over the last millennium," *Science*, 292 (5517), pp. 662–667.
- JONES, R. (ed.), 2007, *Loan-words in Indonesian and Malay*, Leiden: KITLV Press.
- JOUANÈS, C., 2001, "La 'Sufāliya': un poème du maître-pilote Shihab ad-Dīn Aḥmad bin Mājid. Essai de traduction, notes et commentaires. D'après le manuscrit W992 du fonds de répartition des manuscrits de l'Institut des Études Orientales de l'Académie des Sciences de Russie à St Petersburg. Feuillet 83 r à 96 r," *Études Océan Indien*, 31, pp. 35–114.
- JUDDE DE LARIVIÈRE, C., 2002, "Navires, terres et bons d'état: les exigences publiques d'activités économiques privées dans la Venise de la fin du Moyen-Âge," *Cahiers d'Histoire. Revue d'histoire critique*, 88, pp. 123–132.
- JULIEN, G. H., 1933a, *Pages arabico-madécasses. Traduction, Annotations et Commentaires*, Paris: Société d'Éditions Géographiques, Maritimes et Coloniales.
- 1933b, *Pages arabico-madécasses. Un syllabaire Antemahuri, avec indication de la valeur numérique des lettres*, Paris: Société d'Éditions Géographiques, Maritimes et Coloniales.
- JUMA, A. M., 2004, *Unguja Ukuu on Zanzibar: An Archaeological Study of Early Urbanism*, Studies in Global Archaeology 3, Uppsala University.
- JUNKER, L. L., 1994, "The development of centralized craft production systems in AD 500–1600 Philippine chiefdoms," *Journal of Southeast Asian Studies*, 25 (1), pp. 1–30.
- KALUS, L., 2000, "La plus ancienne inscription islamique du monde malais?," *Archipel*, 59, pp. 23–24.
- KAMATH, S. U., 2001, *A Concise History of Karnataka: From Pre-Historic Times to the Present*, Bangalore: Jupiter Books (1st edn. 1980).
- KAMMERER, A., 1950, *La découverte de Madagascar par les Portugais et la cartographie de l'île*, Lisbon: Sociedade de geografia de Lisboa.
- KANAKASABHAI PILLAI, V., 1904, *The Tamils Eighteen Hundred Years ago*, Madras and Bangalore: Higginbotham & Co.
- KAPTEIJNS, L., 2000, "Ethiopia and the Horn of Africa," in N. Levtzion and R. L. Pouwels (eds.), *The History of Islam in Africa*, Athens, OH: Ohio University Press; Oxford: James Currey; Claremont: David Philip, pp. 227–249.
- KARASHIMA, N., 2002, *A Concordance of Nayakas: The Vijayanagar Inscriptions in South India*, New Delhi: Oxford University Press.
- (ed.), 2002, *Ancient and Medieval Commercial Activities in the Indian Ocean: Testimony of Inscriptions and Ceramic Sherds*, Tokyo: Taisho University Press.
- (ed.), 2004, *In Search of Chinese Ceramic Sherds in South India and Sri Lanka*, Tokyo: Taisho University Press.
- KARASHIMA, N. and SUBBARAYALU, Y., 2002, "Ainnuravar: a supra-local organization of South Indian and Sri Lankan merchants," in *Ancient and Medieval Commercial Activities in the Indian Ocean: Testimony of Inscriptions and Ceramic Sherds*, Tokyo: Taisho University, pp. 72–98.
- 2004, "The emergence of the periyannadu assembly in South India during the Chola and Pandyan periods," *International Journal of Asian Studies*, 1, pp. 87–103.
- KARDULIAS, P. N. (ed.), 1999, *World-Systems Theory in Practice: Leadership, Production, and Exchange*, Lanham, MD: Rowman & Littlefield.
- 2007, "Negotiation and incorporation on the margins of world-systems : examples from Cyprus and North America," *Journal of World-Systems Research*, 13 (1), pp. 55–82.
- KATHIRITHAMBY-WELLS, J., 1990, "Introduction: an overview," in J. Kathirithamby-Wells and J. Villiers (eds.), *The Southeast Asian Port and Polity: Rise and Demise*, Singapore University Press, pp. 1–16.
- KEALL, E. J., 2001, "The evolution of the first coffee cups in Yemen," in M. Tuchscherer (ed.), *Le commerce du café avant l'ère des plantations coloniales: espaces, réseaux, sociétés (XVe–XIXe siècle)*, Cairo: Institut Français d'Archéologie Orientale, pp. 35–50.

- KEARNEY, M., 2004, *The Indian Ocean in World History*, New York: Routledge.
- KENOYER, J. M., and BHAN, K. K., 2004, "Sidis and the agate bead industry of western India," in A. Catlin-Jaiarazbhoy and E. A. Alpers (eds.), *Sidis and Scholars: Essays on African Indians*, Noida: Rainbow Publishers, pp. 42–60.
- KENT, R., 1970, *Early Kingdoms in Madagascar 1500–1700*, New York: Holt, Rinehart, and Winston.
- 1982, "The kingdom of Samamo in the diary of Paolo Rodrigues da Costa," *Omalysy Anio (Hier et Aujourd'hui)*, 16, pp. 7–12.
- KERLOUÉGAN, J., 2009a and b, "L'empire des Premiers Ming: le grand réaménagement de la Chine" and "De l'expansion au recentrement: la Chine et son monde," in P. Boucheron (ed.), *Histoire du monde au XV^e siècle*, Paris: Fayard, pp. 193–211 and 619–635.
- KERVAN, M., 1994, "Forteresses, entrepôts et commerce: une histoire à suivre depuis les rois sassanides jusqu'aux princes d'Ormuz," in *Itinéraires d'Orient: hommages à Claude Caben*, Res Orientales VI, Paris: GECMO, pp. 325–350.
- 1998, "Suhār," in C. E. Bosworth, E. van Donzel, W. P. Heinrichs, and G. Lecomte (eds.), *Encyclopédie de l'Islam*, new edn., vol. IX, Leiden: E. J. Brill, p. 808.
- 1999, "Multiples ports at the mouth of the River Indus: Barbarike, Deb, Daybul, Lahori Bandar, Diul Sinde," in H. P. Ray (ed.), *Archaeology of Seafaring: The Indian Ocean in the Ancient Period*, New Delhi: Pragati, pp. 70–153.
- KHALIDI, O., 1988, "African diaspora in India: the case of the Habashis of the Dakan," *Hamdard Islamicus*, 4, pp. 3–22.
- KHAWAM, R. (ed.), 1986, *Les Mille et Une Nuits*, vol. I: *Dames insignes et serviteurs galants*, vol. II: *Les cœurs inhumains*, Paris: Phébus.
- KHOSRAW, NASER-E [Khusrau, Nāṣir-i], 1986, *Books of Travel (Safarnama)*, trans. W. M. Thackston, Albany, NY: Bibliotheca Persica.
- KHOURY, I., 1971, "La Hawiya de Ahmad bin Magid," *Bulletin d'Études Orientales*, 24, pp. 249–386.
- KILLICK, D., 2009a, "Agency, dependency and long-distance trade: East Africa and the Islamic world, ca. 700–1500 CE," in S. Falconer and C. Redman (eds.), *Politics and Power: Archaeological Perspectives on the Landscapes of Early States*, Tucson: University of Arizona Press, pp. 179–207.
- 2009b, "Cairo to Cape: the spread of metallurgy through eastern and southern Africa," *Journal of World Prehistory*, 22, pp. 399–414.
- 2016, "A global perspective on the pyrotechnologies of Sub-Saharan Africa," *Azania, Archaeological Research in Africa*, 51 (1), pp. 62–87.
- KIM, D., 2009, "Les sons corrects pour l'instruction du peuple du roi Sejong," in P. Boucheron (ed.), *Histoire du monde au XV^e siècle*, Paris: Fayard, pp. 500–504.
- KIRKMAN, J., 1952, "The excavations at Kilepwa: an introduction to the mediaeval archaeology of the Kenya Coast," *Antiquaries Journal*, 32, pp. 168–184.
- 1954, *The Arab City of Gedi: Excavations at the Great Mosque, Architecture and Finds*, Oxford University Press.
- 1959, "The excavations at Ras Mkumbuu on the island of Pemba," *Tanganyika Notes and Records*, 53, pp. 161–178.
- 1960, *The Tomb of the Dated Inscription at Gedi*, London: Royal Anthropological Institute of Great Britain.
- 1966, *Ungwana on the Tana*, The Hague: Mouton.
- 1967, "Les importations de céramiques sur la côte du Kenya," *Taloha*, 2, pp. 1–10.
- 1970, "The coast of Kenya as a factor in the trade and culture of the Indian ocean," *Actes du 8^e Colloque International d'Histoire Maritime (Beyrouth, 5–10 septembre 1966)*, Paris: SEVPEN, pp. 247–253.

- KLEPPE, E. J., 2007, "Early Indian Ocean trade with Zanzibar: archaeological evidence," in E. H. Seland (ed.), *The Indian Ocean in the Ancient Period: Definite Places, Translocal Exchange*, BAR International Series 1593, Oxford: Archaeopress, pp. 83–93.
- KNAPPERT, J., 2005, *Swahili Culture*, 2 vols., Lewiston, NY, Queenston, and Lampeter: Edwin Mellen Press.
- KOCHKO, de A., 1988, "Variabilité enzymatique des riz traditionnels malgaches," *L'Agronomie Tropicale*, 43 (3), pp. 203–208.
- KOHL, P. L., 1975, "The importance of long-distance exchange for the emergence of civilization in Southwest Asia," paper presented in the Symposium held by the Department of Sociology and Anthropology, Wellesley College, February.
- 1987, "The ancient economy, transferable technologies and the Bronze Age world-system: a view from the northeastern frontier of the ancient Near East," in M. Rowlands, M. Larsen, and K. Kristiansen (eds.), *Centre and Periphery in the Ancient World*, Cambridge University Press, pp. 13–24.
- KONCZACKY, Z. A. and KONCZACKY, J. M., 2005, *An Economic History of Tropical Africa*, vol. 1: *The Pre-Colonial Period*, London: Frank Cass.
- KOPYTOFF, I., 1986, "The cultural biography of things: commoditization as process," in A. Appadurai (ed.), *The Social Life of Things: Commodities in Cultural Perspective*, Cambridge University Press, pp. 364–391.
- KOSAMBI, D. D., 1956, *An Introduction to the Study of Indian History*, Bombay.
- 1965, *The Culture and Civilisation of Ancient India in Historical Outline*, London: Routledge & Kegan Paul.
- 2001, "Indian feudal trade charters," in R. Chakravarti (ed.), *Trade in Early India*, Oxford University Press, pp. 244–256 (first published 1958, *Journal of the Economic and Social History of the Orient*, 2, pp. 281–293).
- KOUBI, J., 1982, *Rambu Solo', "la fumée descend": le culte des morts chez les Toradja du Sud*, Paris: Éditions du CNRS.
- KRAHL, R., 2010, "Tang blue-and-white," in R. Krahl, J. Guy, J. K. Wilson, and J. Raby (eds.), *Shipwrecked Tang Treasures and Monsoon Winds*, Washington, DC, and Singapore: Arthur M. Sackler Gallery, The Smithsonian's Museum of Asian Art, National Heritage Board, Singapore, and Singapore Tourism Board, pp. 209–212.
- KRAMERS, J. H. and WIET, G. (eds.), 1964, translation of Ibn Hawqal's *Kitāb Sūrat al-ard, Configuration de la terre*, Collection UNESCO d'œuvres représentatives, Paris and Beirut: UNESCO.
- KRÖGER, J., 1999, "Laden with glass goods: from Syria via Iraq and Iran to the Famen Temple in China," in M. Alram and D. E. Klimburg-Salter (eds.), *Coins, Art and Chronology. Essays on the Pre-Islamic History of the Indo-Iranian Borderlands*, Vienna: Verlag der Österreichischen Akademie der Wissenschaften, pp. 481–491.
- KULKE, H., 1993, "A passage to India': temples, merchants and the ocean," *Journal of the Social and Economic History of the Orient*, 36, pp. 154–180.
- 1995, "Introduction: the study of the state in pre-modern India," in H. Kulke (ed.), *The State in India, 1000–1700*, Oxford University Press, pp. 1–47.
- 1999, "Rivalry and competition in the Bay of Bengal in the eleventh century and its bearing on Indian Ocean studies," in O. Prakash and D. Lombard (eds.), *Commerce and Culture in the Bay of Bengal, 1500–1800*, Delhi: Manohar, pp. 17–36.
- 2001, *Kings and Cults. State Formation and Legitimation in India and Southeast Asia*. New Delhi: Manohar (1st edn. 1993).
- 2012, "Trade and politics in eleventh-century Bay of Bengal," in D. P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization*, vol. III, part 7, O. Prakash

- (ed.), "The trading world of the Indian Ocean, 1500–1800," Delhi, Chennai, and Chandigarh: Centre for Studies in Civilizations, pp. 117–130.
- KULKE, H. and ROTHERMUND, D., 1998, 2004, and 2010, *A History of India*, 3rd edn., 4th edn., and 5th edn., London and New York: Routledge (1st edn. 1986).
- KURAN, T., 2005, "The absence of the corporation in Islamic law: origins and persistence," *American Journal of Comparative Law*, 53, pp. 785–834.
- KUS, S. and WRIGHT, H. T., 1986, "Survey archéologique de la région de l'Avaradrano," trans. from the English by P. Vérin, *Taloha*, 10, pp. 49–72.
- KUSIMBA, C. M., 1999, *The Rise and Fall of Swahili States*, Walnut Creek, CA: Altamira Press,
- KUSIMBA, C. M. and KUSIMBA, S. B., 2005, "Mosaics and interactions: East Africa, 2000 b.p. to the present," in A. B. Stahl (ed.), *African Archaeology: A Critical Introduction*, Malden, MA, and Oxford: Blackwell, pp. 392–419.
- KUZNETS, S., 1966, *Modern Economic Growth: Rate, Structure and Spread*, New Haven, CT: Yale University Press.
- LABIB, S. Y., 1965, *Handelsgeschichte Ägyptens im Spätmittelalter (1171–1517)*, Wiesbaden: F. Steiner.
- 1969, "Capitalism in medieval Islam," *Journal of Economic History*, 29, pp. 79–96.
- 1974, "Medieval Islamic maritime policy in the Indian Ocean area," in J. Pirenne (ed.), *Les grandes escales. 1re partie: Antiquité et Moyen-Âge (10e colloque d'Histoire Maritime)*, Brussels: Éditions de la Librairie Encyclopédique, pp. 225–241.
- 1978, "Kārimī," in E. van Donzel, B. Lewis, and C. Pellat (eds.), *Encyclopédie de l'Islam*, Nouvelle Edition, vol. IV, Leiden: E. J. Brill; Paris: G. P. Maisonneuve and Larose, pp. 666–670.
- LACOSTE, Y., 1982, *La géographie du sous-développement*, 5th edn., Paris: PUF.
- La Décroissance*, 2004, no. 1, Paris.
- LAFFAN, M., 2004, "From Zābaj to Jāwa," *ILAS Newsletter*, 35, pp. 17.
- LALLEMENT, M., 2004, "Max Weber, la théorie économique et les apories de la rationalisation économique," *Cahiers du Centre de Recherche Historique*, 34, pp. 47–68.
- LAMB, A., 1964, "Early History," in Wang Gungwu (ed.), *Malaysia: A Survey*, London: Pall Mall, pp. 99–112.
- LANDES, D. S., 1998, *The Wealth and Poverty of Nations*, New York: Norton.
- LANDSCHEIDT, T., 2000a and b, "Solar forcing of El Niño and El Niña" and "Solar wind near Earth: indicator of variations in global temperature," in M. Vázquez and B. Schmieder (eds.), *The Solar Cycle and Terrestrial Climate*, European Space Agency, Special Publication 463, pp. 135–140 and 497–500.
- 2003, "New ENSO forecasts based on solar model," www.john-daly.com/theodor/new-enso.htm
- LANGTON, S. J. et al., 2008, "3500yr record of centennial-scale climate variability from the western Pacific Warm Pool," *Geology*, 36 (10), pp. 795–798.
- LATOUCHE, S., 2004, *Survivre au développement*, Paris: Mille et Une Nuits.
- 2005, *L'invention de l'économie*, Paris: Albin Michel.
- LA VAISSIÈRE, E. de, 2002, *Histoire des marchands sogdiens*, Paris: Collège de France, Institut des Hautes Études Chinoises (2nd edn. 2004).
- LAVIOLETTE, A., 2000, "Swahili archaeology on Pemba island, Tanzania: Pujini, Bandari ya Faraji and Chwaka, 1997–1998," *Nyame Akuma*, 53, pp. 50–63.
- 2008, "Swahili cosmopolitanism in Africa and the Indian Ocean world, AD 600–1500," *Archaeologies*, 4 (1), pp. 24–49.
- LAVIOLETTE, A. and FLEISHER, J., 2009, "The urban history of a rural place: Swahili archaeology on Pemba Island, Tanzania, 700–1500 AD," *International Journal of African Historical Studies*, 42 (3), pp. 433–455.

- LE BOURDIEC, F., 1978, *Hommes et paysages du riz à Madagascar*, Antananarivo: FTM.
- LEGUÉVEL DE LACOMBE, B., 1840, *Voyages à Madagascar et aux îles Comores (1823-1830)*, 2 vols. Paris: Louis Désessart.
- LEITÃO, H. DOS SANTOS (ed.), 1970, *Os dois descobrimentos do Ilha de São Lourenço*, Lisbon: Centro de Estudos históricos ultramarinos.
- LEONG SAU HENG, 1990, "Collecting centers, feeder points and entrepôts in the Malay Peninsula, c. 1000 BC – AD 1400," in J. Kathirithamby-Wells and J. Villiers (eds), *The Southeast Asian Port and Polity: Rise and Demise*, Singapore University Press, pp. 17–38.
- LEUR, J. C. VAN, 1955, *Indonesian Trade and Society*, The Hague: W. van Hoeve.
- LEVATHES, L., 1994, *When China Ruled the Seas: The Treasure Fleet of the Dragon Throne 1405–1433*, Oxford University Press.
- LEVTZION, N., 2000, "Islam in the Bilad al-Sudan to 1800," in N. Levtzion and R. L. Pouwels (eds.), *The History of Islam in Africa*, Athens, OH: Ohio University Press; Oxford: James Currey; Claremont: David Philip, pp. 63–90.
- LEVTZION, N. and POUWELS, R. L. (eds.), 2000, *The History of Islam in Africa*, Athens, OH: Ohio University Press; Oxford: James Currey; Claremont: David Philip.
- LÉVY, A., 1995, *Les pèlerins bouddhistes de la Chine aux Indes*, Paris: Jean-Claude Lattès.
- LEWICKI, T., 1936, "Les premiers commerçants arabes en Chine," *Rocznik Orjentalistyczny* (Lwow), 11, pp. 173–186.
- 1974, *Arabic External Sources of the History of Africa to the South of Sahara*, London: Curzon Press; Lagos: Pilgrim Books (1st edn. 1969).
- LEWIS, B., 1982, *The Muslim Discovery of Europe*, New York: W. W. Norton.
- 1987, *Islam, from the Prophet Muhammad to the Capture of Constantinople*, vol. II: *Religion and Society*, Oxford University Press.
- 1990, *Race and Slavery in the Middle East: An Historical Enquiry*, Oxford University Press.
- LIAO, D.-K., 1990, "Songdai yaren he yahang yu haiwai maoyi" [Yaren and Yahang of the Song Dynasty, their relationship with the maritime trade], *Haijiaoshi yanjiu*, 2, pp. 9–14.
- LIEBERMAN, V., 1997, "Transcending East–West dichotomies," *Modern Asian Studies*, 31, pp. 463–546.
- 2003 and 2009, *Strange Parallels: Southeast Asia in Global Context, c. 800–1830*, vol. 1: *Integration on the Mainland*; vol. II: *Mainland Mirrors: Europe, Japan, China, South Asia, and the Islands*, Cambridge University Press.
- LIEBNER, H. H., 2014, "The Siren of Cirebon, a tenth-century trading vessel lost in the Java Sea," Ph.D. thesis, University of Leeds.
- LINTON, R., 1933, *The Tanala: A Hill Tribe of Madagascar*, Chicago: Field Museum of Natural History.
- LISZKOWSKI, H. D., 2001, "Mjini-Dembeni: site archéologique de Mayotte post-archaïque or pré-classique?," *Études Océan Indien*, 31, pp. 207–241.
- 2011, "Les décors des céramiques communes de la période archaïque à Mayotte: contribution à l'étude d'un faciès régional," in *Civilisations des mondes insulaires (Madagascar, îles du canal de Mozambique, Mascareignes, Polynésie, Guyanes). Mélanges en l'honneur du Professeur Claude Allibert*, Paris: Karthala, pp. 633–653.
- LIU, L., 2004, *The Chinese Neolithic: Trajectories to Early States*, Cambridge University Press.
- LIU, L. and CHEN, X., 2003, *State Formation in Early China*, London: Duckworth.
- 2012, *The Archaeology of China: From the Late Paleolithic to the Early Bronze Age*, Cambridge University Press.

- LIU, X., 2010, *The Silk Road in World History*, Oxford University Press.
- LIVERANI, M., 2014, *The Ancient Near East: History, Society and Economy*, New York: Routledge.
- LO, J., 1970, "Chinese shipping and East-West trade from the tenth to the fourteenth century," in M. Mollat (ed.), *Sociétés et Compagnies de commerce en Orient et dans l'Océan Indien*, Paris: SEVPEN., pp. 215–225.
- LOEB, E. M. and HEINE-GELDERN, R., 1935, *Sumatra: Its History and People*, Vienna: Institut für Völkerkunde der Universität Wien.
- LOISEAU, J., 2009, "De l'Asie centrale à l'Égypte: le siècle turc," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 33–51.
- LOMBARD, D., 1988a and b, "Y a-t-il une continuité des réseaux marchands asiatiques?" and "Le sultanat malais comme modèle socio-économique," in D. Lombard and J. Aubin (eds.), *Marchands et hommes d'affaires asiatiques dans l'Océan Indien et la mer de Chine: 13e–20e siècles*, Paris: EHESS, pp. 11–18 and 117–124.
- 1990, *Le carrefour javanais: essai d'histoire globale*, vol. I: *Les limites de l'occidentalisation*; vol. II: *Les réseaux asiatiques*; vol. III: *L'héritage des royaumes concentriques*, Paris: EHESS.
- LOMBARD, D. and AUBIN, J. (eds.), 1988, *Marchands et hommes d'affaires asiatiques dans l'Océan Indien et la mer de Chine: 13e–20e siècles*, Paris: EHESS.
- LOMBARD, D. and PELRAS, D., 1981, "La totalité divine et ses composantes: divinité suprême, couple divin, trinité dans les religions indonésiennes," in *Dictionnaire des mythologies*, vol. II, Paris, Flammarion, pp. 498–500.
- LOMBARD, M., 1971, *L'Islam dans sa première grandeur VIIIe–XIe siècles*, Paris: Flammarion (reissued 1980, 1987).
- 1972, *Espaces et réseaux du haut moyen âge*, Paris: École Pratique des Hautes Études, Mouton.
- 2002, *Les textiles dans le monde musulman du 7e au 12e siècles*, Paris: EHESS (1st edn. 1978).
- LOPEZ, R. S., 1952, "Economie et architecture médiévales: cela aurait-il tué ceci?," *Annales ESC*, pp. 433–438.
- 1975, *Su e giù per la storia di Genova*, Genoa: Bozzi.
- 1976, *The Commercial Revolution of the Middle Ages, 950–1350*, Cambridge University Press.
- 1979, "The dawn of the medieval banking," in F. Chiappelli (ed.), *The Dawn of Modern Banking*, New Haven, CT, and London: Yale University Press, pp. 1–23.
- 1987, "The trade of medieval Europe: the South," in M. M. Postan and E. Miller (eds.), *The Cambridge Economic History of Europe*, 2nd edn., vol. II, Cambridge University Press, pp. 306–398 (1st edn. 1952).
- LOVEJOY, P. E., 2000, *Transformations in Slavery: A History of Slavery in Africa*, 2nd edn., Cambridge University Press (1st edn. 1983).
- LUNA, K. M. de, 2016, *Collecting Food, Cultivating People: Subsistence and Society in Central Africa to the Seventeenth Century*, New Haven, CT: Yale University Press.
- Ma HUAN, 1970, *Ying-yai Sheng-lan: "The Overall Survey of the Ocean's Shores" [1433]*, trans. and annotated by J. V. G. Mills, Cambridge: Hakluyt Society.
- MA WENKUAN, 2004, "Islamic glass unearthed in China," in E. Byrne Curtis (ed.), *Pure Brightness Shines Everywhere: The Glass of China*, Aldershot: Ashgate, pp. 29–38.
- MACAIRE, P., 1996, *L'héritage Makhurwa au Mozambique*, Paris: L'Harmattan.
- MCBAIN, A. Y., 1992, "Les céramiques chinoises d'exportation dans les collections du musée d'art et d'archéologie," *Taloha*, II, pp. 71–76.
- MCCLELLAN, J. E. and DORN, H., 1999, *Science and Technology in World History: An Introduction*, Baltimore, MD: Johns Hopkins University Press.
- MACEachern, S., 2005, "Two thousand years of West African history," in A. B. Stahl (ed.), *African Archaeology: A Critical Introduction*, Malden, MA, and Oxford: Blackwell, pp. 441–466.

- McEVEDY, C. and JONES, R., 1978, *Atlas of World Population History*, Harmondsworth: Penguin Books.
- MACHADO, P., 2011, "Awash in a sea of cloth: Gujarat, Africa and the western Indian Ocean 1300–1800," in P. Parthasarathi and G. Riello, *The Spinning World: A Global History of Cotton Textiles, 1200–1850*, Oxford University Press, pp. 161–179.
- MCNEILL, W. H., 1974, *The Shape of European History*, Oxford University Press.
- 1982, *The Pursuit of Power: Technology, Armed Forces and Society since AD 1000*, Chicago University Press.
- 1993, "Comments" on A. G. Frank's article "Bronze Age world system cycles," *Current Anthropology*, 34 (4), pp. 416–417.
- 1998a, "World history and the rise and fall of the West," *Journal of World History*, 9 (2), pp. 215–236.
- 1998b, *Plagues and Peoples*, rev. edn., New York: Anchor Books. (1st edn. 1976).
- MACPHEE, R. D. E. and BURNEY, D. A., 1991, "Dating of modified femora of extinct dwarf hippopotamus from southern Madagascar: implications for constraining human colonization and vertebrate extinction events," *Journal of Archaeological Science*, 18, pp. 695–706.
- MACPHERSON, K., 1998, *The Indian Ocean. A History of People and the Sea*, Delhi: Oxford University Press.
- MACQUARIE, J.-L., 1884, *Voyage à Madagascar*, Paris: E. Dentu.
- MAGALHÃES-GODINHO, V., 1969, *L'économie de l'empire portugais aux 15e et 16e siècles*, Paris: SEVPEN.
- 1990, *Mito e mercadoria, utopia e prática de navegar, séculos XIII–XVIII*, Lisbon: Difusão Editorial.
- MAGGS, T., 1976, "Iron Age communities of the southern Highveld," Natal Museum, Pietermaritzburg, Occasional Paper no. 1, Department of Archaeology, National Museum, Bloemfontein.
- MAGNAVITA, S., 2003, "The Beads of Kissi," *Journal of African Archaeology*, 1 (1), pp. 127–138.
- 2008, "The oldest textiles from Sub-Saharan West Africa: woolen facts from Kissi, Burkina Faso," *Journal of African Archaeology*, 6 (2), pp. 243–257.
- 2013, "Initial encounters: seeking traces of ancient trade connections between West Africa and the wider world," *Afriques*, 4, special issue, T. Vernet, C. Lefebvre, and R. Seignobos (eds.), "Histoire et archéologie du Sahel ancien: nouveaux regards, nouveaux chantiers," <http://afriques.revues.org/>
- MAHDI, W., 1994a and b, "Some Austronesian maverick protoforms with culture-historical implications," *Oceanic Linguistics*, 33 (1), pp. 167–229, and 33 (2), pp. 421–490.
- 1998, "Linguistic data on transmission of South-East Asian cultigens to India and Sri Lanka," in R. Blench and M. Spriggs (eds.), *Archaeology and Language II: Archaeological Data and Linguistic Hypotheses*, London and New York: Routledge, pp. 390–415.
- 2007, *Malay Words and Malay Things: Lexical Souvenirs from an Exotic Archipelago in German Publications before 1700*, Wiesbaden: Harrassowitz.
- 2008, "Yavadvipa and the Merapi volcano in West Sumatra," *Archipel*, 75, pp. 111–143.
- MAHEFAMANANA, M., 1977, *Ali-Tawarath sy Madagasikara 1495–1548*, ed. J. Rakotonirainy, Antananarivo: Imprimerie Tatsinanana.
- MAJOR, R. H. (ed.), 1867, *India in the Fifteenth Century, Being a Collection of Narratives of Voyages to India in the Century Preceding the Portuguese Discovery of the Cape of Good Hope*, London: The Hakluyt Society.
- MALEKANDATHIL, P., 2007, "Winds of change and links of continuity: a study on the merchant groups of Kerala and the channels of their trade, 1000–1800," *Journal of the Economic and Social History of the Orient*, 50 (2–3), pp. 259–286.
- MANDEVILLE, J. DE, 2004, *Voyage autour de la terre*, ed. C. Deluz, Paris: Les Belles Lettres.

- MANGUIN, P.-Y., 1985a, "Late mediaeval Asian shipbuilding in the Indian Ocean: a reappraisal," *Moyen Orient et Océan Indien / Middle East and Indian Ocean, XVIe–XIXe s.*, 2 (2), pp. 1–30.
- 1985b, "Sewn-plank craft of South-East Asia: a preliminary survey," in S. McGrail and E. Kentley (eds.), *Sewn Planked Boats: Archaeological and Ethnographic Papers Based on those Presented to a Conference at Greenwich in November, 1984* (Archaeological Series 10 / BAR International Series 276), Oxford and Greenwich: National Maritime Museum, pp. 319–343.
- 1993, "Trading ships of the South China Sea: shipbuilding techniques and their role in the history of the development of Asian trade networks," *Journal of the Economic and Social History of the Orient*, 36, pp. 253–279.
- 1996, "Southeast Asian shipping in the Indian Ocean during the first millennium AD," in H. P. Ray and J.-F. Salles (eds.), *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, Delhi: Manohar, pp. 181–196.
- 2000a, "Les techniques de construction navale aux Maldives originaires d'Asie du Sud-Est," *Techniques et culture*, 35–36, pp. 21–47.
- 2000b, "Shipshape societies: boat symbolism and political systems in Insular Southeast Asia," *Techniques et culture*, 35–36, pp. 373–400.
- 2000c, "City-states and city-state cultures in pre-15th century Southeast Asia," in M. H. Hansen (ed.), *A Comparative Study of Thirty City-State Cultures*, Copenhagen: Det Kongelige Danske Videnskabernes Selskab, pp. 409–416.
- 2000d, "Les cités-états de l'Asie du Sud-Est côtière: de l'ancienneté et de la permanence des formes urbaines," *Bulletin de l'Ecole française d'Extrême-Orient*, 87, pp. 151–182.
- 2002, "The amorphous nature of coastal polities in Insular Southeast Asia: restricted centres, extended peripheries," *Moussons*, 5, pp. 73–99.
- 2004, Notices on "Sriwijaya," "Oc Eo," "Shipbuilding," and "Firearms," in Ooi Keat Gin (ed.), *Southeast Asia: A Historical Encyclopedia, from Angkor Wat to East Timor*, 3 vols., Santa Barbara: ABC-CLIO.
- 2010, "Pan-regional responses to South Asian inputs in early Southeast Asia," in B. Bellina, E. A. Bacus, T. O. Pryce, and J. Wisseman Christie (eds.), *50 Years of Archaeology in Southeast Asia: Essays in Honour of Ian Glover*, Bangkok: River Books, pp. 170–181.
- 2011, "The Maldives connection: pre-modern Malay World shipping across the Indian Ocean," in *Civilisations des mondes insulaires (Madagascar, îles du canal de Mozambique, Mascareignes, Polynésie, Guyanes): mélanges en l'honneur du Professeur Claude Allibert*, Paris: Karthala, pp. 261–284.
- 2012, "Asian ship-building traditions in the Indian Ocean at the dawn of European expansion," in D. P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization*, vol. III, part 7, O. Prakash (ed.), *The Trading World of the Indian Ocean, 1500–1800*, Delhi, Chennai, and Chandigarh: Centre for Studies in Civilizations, pp. 597–629.
- 2016, "Austronesian shipping in the Indian Ocean: from outrigger boats to trading ships," in G. Campbell (ed.), *Early Exchange between Africa and the Wider Indian Ocean World*, London and New York: Palgrave Macmillan, pp. 51–76.
- MANN, M. E., 1986, *The Sources of Social Power*, vol. 1: *A History of Power from the Beginning to AD 1760*, Cambridge University Press.
- 2000, "Lessons for a new millennium," *Science*, 289 (5477), pp. 253–254.
- MANN, M. E., BRADLEY, R. S., and HUGUES, M. K., 1999, "Northern Hemisphere temperatures during the past millennium: inferences, uncertainties, and limitations," *Geophysical Research Letters*, 26 (6), pp. 759–762.
- MANN, M. E. and JONES, P. D., 2003, "Global surface temperatures over the past two millennia," *Geophysical Research Letters*, 30 (15), 1820, doi:10.1029/2003GL017814.
- MANN, M. E., CANE, M., ZEBIAK, S., and CLEMENT, A., 2005, "Volcanic and solar forcing of the tropical Pacific over the past 1000 years," *Journal of Climate*, 18, pp. 447–456.

- MANN, M. E, ZHANG, Z., HUGHES, M. K., *et al.*, 2008, "Proxy-based reconstructions of hemispheric and global surface temperature variations over the past two millennia," *Proceedings of the National Academy of Sciences of the United States of America*, 105, pp. 13252–13257.
- MAPUNDA, B. B., 2001, "The archaeology of the Ruhuhu River basin, eastern shore of Lake Nyasa," in F. Chami, G. Pwiti, and C. Radimilahy (eds.), *People, Contacts and the Environment in the African Past*, Studies in the African Past-1, Dar es Salaam University Press, pp. 98–112.
- MAQBUL AHMAD, S., 1989, *Arabic Classical Accounts of India and China. Book One Al-Masālik wa'l-Mamālik, Roads and Kingdoms by Ibn Khurdādhbih d.c. A.H. 300/AD 912. Book Two Akhbār al-Sin wa'l-Hind, An Account of China and India, by Sulaymān al-Tājir et al., compiled in AD 851*, trans. from original Arabic with commentaries by S. Maqbul Ahmad, Calcutta: Indian Institute of Advanced Study.
- MARET, P. DE, 1995, "Croisette histories," in L. de Heusch (ed.), *Objects: Signs of Africa*, Tervuren: Musée Royal de Africa Centrale, pp. 133–149.
- 2005, "From pottery groups to ethnic groups in central Africa," in A. B. Stahl (ed.), *African Archaeology: A Critical Introduction*, Malden, MA, and Oxford: Blackwell, pp. 420–440.
- MARGARITI, R. E., 2007, *Aden and the Indian Ocean Trade: 150 Years of the Life of a Medieval Arabian Port*, Chapel Hill, NC: University of North Carolina Press.
- MARKOVITS, C. (ed.), 1994, *Histoire de l'Inde Moderne – 1480–1950*, Paris: Fayard.
- 2004, *A History of Modern India, 1480–1950*, London: Anthem Press.
- MARKOVITS, C. and SUBRAHMANYAM, S., 2009, "Navigation, exploration, colonisation: pour en finir avec les grandes découvertes," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 603–618.
- MARKS, R. B., 1998, *Tigers, Rice, Silk and Silt: Environment and Economy in Late Imperial South China*, Cambridge University Press.
- MARTIN, B. G., 1974, "Arab migration to East Africa in medieval times," *International Journal of African Historical Studies*, 7 (3), pp. 367–390.
- MARTIN, N., 2010, "Les productions céramiques de l'océan Indien occidental: implications culturelles au carrefour d'influences," Ph.D. thesis, Institut National de Langues et Civilisations Orientales.
- MARTIN-PUERTAS, C. *et al.*, 2012, "Regional atmospheric circulation shifts induced by a grand solar minimum," *Nature Geoscience*, 5, pp. 397–401.
- MARTINEZ-GROS, G., 2009, "La seconde islamisation du monde," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 636–650.
- MASSIGNON, L., 1962, *Les nuages de Magellan et leur découverte par les Arabes*, Paris: Librairie Orientaliste Paul Geuthner.
- MASSING, A. W., 2000, "The Wangara, an Old Soninke diaspora in West Africa?," *Cahiers d'Études Africaines*, 158, pp. 281–308.
- MAS'ŪDĪ, 1841, *The Meadows of Gold and Mines of Gems*, vol. 1, trans. from the Arabic by A. Sprenger, London: Printed for the Oriental Translation Fund of Great Britain and Ireland.
- 1962, 1965, *Les prairies d'or*, trans. Barbier de Meynard and Pavet de Courteille, revised and corrected by C. Pellat, Paris: Société Asiatique, vols. I and II.
- MATHER, K. A., MOLINA, J., FLOWERS, J., RUBINSTEIN, S., RAUH, B., LAWTON-RAUTH, A., *et al.*, 2010, "Migration, isolation and hybridization in island crop populations: the case of Madagascar rice," *Molecular Ecology*, 19, pp. 4892–4905.
- MATHEW, K. S. (ed.), 1997, *Shipbuilding and Navigation in the Indian Ocean Region AD 1400–1800*, New Delhi: Munshiram Manoharlal Publishers.

- MATVEIEV, V., 1985, "L'essor de la civilisation Swahili," in D. T. Niane (ed.), *Histoire générale de l'Afrique*, vol. IV: *L'Afrique du XIIIe au XVIe siècle*, Paris: UNESCO/Nouvelles Éditions Africaines, pp. 495–522.
- MAUCOURANT, J., 2004, "Max Weber et le néomodernisme," *Cahiers du Centre de Recherches Historiques*, 34, pp. 79–87.
- 2008, "Figures du néomodernisme: le 'marché' est-il un 'signifiant vide'?", in Y. Roman and J. Dalaison (eds.), *L'économie antique, une économie de marché?*, Actes de deux Tables rondes tenues à Lyon en 2004, Paris: de Boccard, pp. 17–47.
- MAUSS, M., 1983, "Essai sur le don: forme et raison de l'échange dans les sociétés archaïques," in *Sociologie et anthropologie*, Paris: PUF, pp. 143–279 (1st edn. 1950).
- MAYEUR, N., 1913, "Voyage dans le Sud et dans l'intérieur des terres et particulièrement au pays d'Hancove (1777)," written by B. de Froberville, and "Voyage au pays d'Ancove (1785)," ed. M. Dumaine, *Bulletin de l'Académie Malgache*, 11 and 12, pp. 139–176 and 14–49.
- MAZOYER, M. and ROUDART, L., 1998, *Histoire des agricultures du monde du Néolithique à la crise contemporaine*, Paris: Seuil.
- MEADOWS, D. H., MEADOWS, D. L., RANDERS, J., and BEHRENS, W. H., 1970, *The Limits to Growth. A Report for the Club of Rome's Project on the Predicament of Mankind*, New York: Universe Books.
- MEDEROS, A. and LAMBERG-KARLOVSKY, C. C., 2004, "Weight systems and trade networks in the Old World (2500–1000 BC)," in M. Hudson and C. Wunsch (eds.), *Creating Economic Order: Record-Keeping, Standardization and the Development of Accounting in the Ancient Near East*, Bethesda, MD: CDL Press, pp. 199–214.
- MEICUN, L. and RAN, Z., 2014, "On the archaeological evidence of Zheng He's voyages to Hormuz Island," *Antiquity*, 89 (344), pp. 417–432.
- MEILINK-ROELOFSZ, M. A. P., 1962, *Asian Trade and European Influence in the Indonesian Archipelago between 1500 and about 1630*, The Hague: Martinus Nijhoff.
- MELOY, J. L., 2003, "Imperial strategy and political exigency: the Red Sea Spice trade and the Mamluk sultanate in the fifteenth century," *Journal of the American Oriental Society*, pp. 1–19.
- MENJOT, D., 2009, "Les monarchies ibériques: genèse de l'Espagne," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 115–133.
- MEZ, A., 1922, *Die Renaissance des Islam*, Heidelberg: Carl Winters Universitätsbuchhandlung.
- MICHALOWSKI, M., 1984, "La christianisation de la Nubie," in G. Mokhtar (ed.), *Histoire générale de l'Afrique*, vol. 11: *Afrique ancienne*, Paris: Jeune Afrique/UNESCO, pp. 347–362.
- MICHEAU, F., 2000, "Bagdad," in J.-C. Garcin (ed.), *Grandes villes méditerranéennes du monde musulman médiéval*, École Française de Rome, pp. 87–112.
- MIDDLETON, J., 1992, *The World of the Swahili: An African Mercantile Civilization*, New Haven, CT, and London: Yale University Press.
- MIEHE, G., SCHLÜTZ, F., MIEHE, S., OPGENOORTH, L., CERMAK, J., SAMIYA, R., JÄGER, E. J., and WESCHE, K., 2007, "Mountain forest islands and Holocene environmental changes in Central Asia: a case study from the southern Gobi Altay, Mongolia," *Palaeogeography, Palaeoclimatology, Palaeoecology*, 250, pp. 150–166.
- MIELANTS, E. H., 2007, *The Origins of Capitalism and the 'Rise of the West'*, Philadelphia, PA: Temple University Press.
- MIGEOTTE, J., 2007, *L'économie des cités grecques de l'archaïsme au Haut Empire romain*, 2nd edn., Paris: Ellipses Marketing.
- MIKKELSEN, E., 2000, *Archaeological Excavations of a Monastery at Kaashidboo*, Malé, Maldives: National Centre for Linguistic and Historical Research.
- MIKSIC, J., 2004a, "The classical cultures of Indonesia," in I. Glover and P. Bellwood (eds.), *Southeast Asia, From Prehistory to History*, Abingdon and New York, Routledge/Curzon, pp. 234–256.

- 2004b, "Mataram," in Ooi Keat Gin (ed.), *Southeast Asia: A Historical Encyclopedia, from Angkor Wat to East Timor*, Santa Barbara: ABC-Clio, vol. II, pp. 863–864.
- MILLE, A., 1970, *Contribution à l'étude des villages fortifiés de l'Imerina ancien*, Antananarivo: Université de Madagascar.
- MILLER, D., 2001, "Metal assemblages from Greefswald areas K2, Mapungubwe Hill and Mapungubwe Southern Terrace," *South African Archaeological Bulletin*, 56 (173 and 174), pp. 83–103.
- 2002, "Smelter and smith: Iron Age metal fabrication technology in southern Africa," *Journal of Archaeological Science*, 29 (10), pp. 1083–1131.
- 2003, "Indigenous copper-mining and smelting in pre-colonial Southern Africa," in P. Craddock and J. Lang (eds.), *Mining and Metal Production through the Ages*, London: British Museum Press, pp. 101–110.
- MILLER, D., DESAI, N., and LEE-THORP, J., 2000, "Indigenous gold mining in Southern Africa: a review," in M. Leslie and T. Maggs (eds.), *African Naissance: The Limpopo Valley 1000 Years Ago*, Cape Town: South African Archaeological Society, pp. 91–99.
- MILLER, D. and WHITELAW, G., 1994, "Early Iron Age metal working from the site of Kwagandaganda, Natal, South Africa," *South African Archaeological Bulletin*, 49 (160), pp. 79–89.
- MILLS, J. V. G. (ed.), 1970: see MA HUAN.
- MILLS, R. F., 1975, "Proto-South Sulawesi and Proto-Austronesian phonology," Ph.D. thesis, University of Michigan, Ann Arbor, University Microfilms International.
- MIQUEL, A., 1967, 1975, 1980, *La géographie humaine du monde musulman jusqu'au milieu du 11^e siècle*, vol. I: *Géographie et géographie humaine dans la littérature arabe des origines à 1050*; vol. II: *Géographie arabe et représentation du monde : la terre et l'étranger*; vol. III: *Le milieu naturel*, Paris and The Hague: Mouton and École des Hautes Études en Sciences Sociales.
- MITCHELL, P., 2002, *The Archaeology of Southern Africa*, Cambridge University Press.
- 2013, "Early farming communities of southern and south-central Africa," in P. Mitchell and P. Lane (eds.), *The Oxford Handbook of African Archaeology*, Oxford University Press, pp. 657–670.
- MOBERG, A., SONECHKIN, D. M., HOLMGREN, K., DATSENKO, N. M., and KARLEN, W., 2005, "Highly variable Northern Hemisphere temperatures reconstructed from low- and high-resolution proxy data," *Nature*, 433 (7026), pp. 613–617.
- MODELSKI, G., 2003, *World Cities: 3000 to 2000*, Washington, DC: Faros 2000.
- MODELSKI, G., DEVEZAS, T., and THOMPSON, W. R., 2008, *Globalization as Evolutionary Process. Modeling Global Change*, Abingdon and New York: Routledge.
- MOIN, A., 2012, *The Millennial Sovereign: Sacred Kingship and Sainthood in Islam*, New York: Columbia University Press.
- MOKYR, J., 1990, *The Lever of Riches*, Oxford University Press.
- 2002, *The Gifts of Athena: Historical Origins of the Knowledge Economy*, Princeton University Press.
- MOLET, L., 1957, "Reconnaissance archéologique au lac Alaotra," *Le Naturaliste Malgache*, 9, 2.
- 1962, "Les monnaies à Madagascar," *Cahiers de l'Institut de Science économique appliquée*, série 5, pp. 203–234.
- 1972, "Origine et sens du nom des Sakalava de Madagascar," in *Etudes de géographie tropicale offertes à Pierre Gourou*, Paris and The Hague: Mouton, pp. 341–355.
- 1979, *La conception malgache du monde, du surnaturel et de l'homme en Imerina*, 2 vols. Paris: L'Harmattan.
- MOLET, L. and VERNIER E., 1956, "L'éléphant de pierre de Vohitsara," *Tananarive, Le Naturaliste malgache*, 8 (2), pp. 269–276.

- MOLLAT, M. (ed.), 1970, *Sociétés et compagnies de commerce en Orient et dans l'océan Indien*, Paris: SEVPEN.
- MONDAIN, G., 1904, *Des idées religieuses des Hova avant l'introduction du christianisme*, Paris: Missions Evangéliques.
- MOOKERJI, R. K., 1999, *Indian Shipping: A History of the Sea-Borne Trade and Maritime Activity of the Indians from the Earliest Times*, New Delhi: Munshiram Manoharlal (1st edn. 1912).
- MOORE, E. H., 2007, *Early Landscapes of Myanmar*, Bangkok: Riverbooks.
- MORANVILLÉ, H., 1894, "Mémoire sur Tamerlan et sa cour par un dominicain, en 1403," *Bibliothèque de l'école des chartes*, 55, pp. 433–464.
- MORIN, E., 2005, *Introduction à la pensée complexe*, Paris: Seuil.
- MORINEAU, M., 1999, "Eastern and Western merchants from the sixteenth to the eighteenth centuries," in S. Chaudhury and M. Morineau (eds.), *Merchants, Companies and Trade: Europe and Asia in the Early Modern Era*, Cambridge University Press, and Maison des Sciences de l'Homme, pp. 116–144.
- MORRIS, I., 2009, "The greater Athenian state," in I. Morris and W. Scheidel (eds.), *The Dynamics of Ancient Empires: State Power from Assyria to Byzantium*, Oxford University Press, pp. 99–177.
- 2013, *The Measure of Civilization*, Princeton University Press.
- MORRISON, K., 2000, "Naturalizing disaster: from drought to famine in Southern India," in G. Bawden and R. M. Reycraft (eds.), *Naturalizing Disaster and the Archaeology of Human Response*, Chicago University Press, pp. 21–33.
- 2002, "Pepper in the hills: upland–lowland exchange and the intensification of the spice trade," in K. D. Morrison and L. L. Junker (eds.), *Forager-Traders in South and Southeast Asia*, Cambridge University Press, pp. 105–128.
- MORRISON, K. D., 2006, "Historicizing foraging in South Asia: power, history, and ecology of Holocene hunting and gathering," in M. T. Stark (ed.), *Archaeology of Asia*, Malden, MA, and Oxford: Blackwell, pp. 279–302.
- MPU Prapañca, 1995, *Desawarnana (Nāgarakṛtāgama)*, trans. and ed. S. Robson, Leiden: KITLV Press.
- MUDAR, K. M., 1999, "How many Dvaravati kingdoms? Locational analysis of first millennium AD moated settlements in central Thailand," *Journal of Anthropological Archaeology*, 18 (1), pp. 1–28.
- MUKHERJEE, R., 2007, "The neglected sea – the eastern Indian Ocean in history," *Journal of the Asiatic Society*, 49 (4), pp. 18–49.
- 2011, "Introduction," in R. Mukherjee (ed.), *Pelagic Passageways: The Northern Bay of Bengal before Colonialism*, New Delhi: Primus Books, pp. 1–260.
- MUKUND, K., 1999, *The Trading World of the Tamil Merchant: Evolution of Merchant Capitalism in the Coromandel*, London: Sangam Books.
- MUNTHE, L., 1982, *La tradition arabico-malgache vue à travers le manuscrit A- 6 d'Oslo et d'autres manuscrits disponibles*, Antananarivo: Trano Printy Loterana.
- 1985, "La tradition arabico-malgache et l'influence indonésienne," *Omaly sy Anio (Hier et Aujourd'hui)*, 21–22, pp. 57–59.
- AL-MUQADDASĪ (died c. 1000), *Ahsan al-Taḡasim fi Marifat al-Aqalim*, ed. G. S. A. Ranking and R. F. Azoo, 1897–1910, Calcutta: Asiatic Society.
- MURDOCH, G. P., 1959, *Africa: Its Peoples and Their Culture History*, New York, Toronto, and London: McGraw-Hill.
- MUS, P., 1935, *Barabudur*, vol. 1, Hanoi: Imprimerie d'Extrême-Orient.
- MUTORO, H., 1998, "Precolonial trading systems in the East African interior," in G. Connah (ed.), *Transformations in Africa*, London: Leicester University Press, pp. 186–203.

- MWOROHA, E., 1977, *Peuples et rois de l'Afrique des lacs: le Burundi et les royaumes voisins au XIXe siècle*, Dakar and Abidjan: Nouvelles Éditions Africaines.
- NAKAZATO, M., 2011, "An optimal tax that destroyed the government. an economic analysis of the decline of the Tang dynasty," www.j.u-tokyo.ac.jp/sl-lr/o6/papers/vo6part12
- NÂŞIR-İ KHUSRAU, 1986, *Book of Travels*, ed. Wheeler McIntosh Thackston, Bibliotheca Persica, https://openlibrary.org/publishers/Bibliotheca_Persica
- NDAYISHINGUJE, P., 1977, *L'Intronisation d'un mwami: la royauté capture les rois*, Nanterre: Laboratoire d'Ethnologie et de sociologie comparative.
- NEEDHAM, J., 1970, "Abstract of material presented to the International Maritime History Commission at Beirut," in M. Mollat (ed.), *Sociétés et Compagnies de commerce en Orient et dans l'Océan Indien*, Paris: SEVPEN., pp. 139-165.
- 1974, *La tradition scientifique chinoise*, Paris: Hermann.
- 1991, *Dialogue des civilisations Chine-Occident: Pour une histoire œcuménique des sciences*, ed. G. Métailié, Paris: La Découverte.
- NEEDHAM, J. *et al.*, 1954-2000, *Science and Civilisation in China*, vol. 1: *Introductory orientations*, J. Needham and Wang Ling (1956); vol. II: *History of Scientific Thought*, J. Needham and Wang Ling (1956); vol. III: *Mathematics and the Sciences of the Heavens and Earth*, J. Needham and Wang Ling (1959); vol. IV (2): *Mechanical Engineering*, J. Needham and Wang Ling (1965); vol. IV (3): *Civil Engineering and Nautics*, J. Needham, Wang Ling, and Lu Gwei-djen (1971); vol. V (1), *Chemistry and Chemical Technology: Paper and Printing*, J. Needham and Tsien Tsuen-Hsuei (1985); vol. V (4): *Chemistry and Chemical Technology. Spagyric Discovery and Invention: Apparatus, Theories and Gifts*, J. Needham, Ho Ping-Yu, Lu Gwei-djen, and N. Sivin (1980); vol. V (7): *Military Technology: The Gunpowder Epic*, J. Needham, Ho Ping-Yu, Lu Gwei-djen, and Wang Ling (1987); vol. V (9): *Textile Technology: Spinning and Reeling*, D. Kuhn (1986); vol. VI (2): *Agriculture*, F. Bray (1988); vol. VI (6) *Biology and Biological Technology: Medicine* (2000); vol. VII (2), *General Conclusions and Reflections*, K. G. Robinson (2004), Cambridge University Press.
- NEWITT, M. 1995, *History of Mozambique*, London: Hurst.
- 2002, *East Africa*, Aldershot: Ashgate.
- NIANE, D. T., 1985, "Les relations entre les différentes régions – échanges entre les régions," in D. T. Niane (ed.), *Histoire générale de l'Afrique*, vol. IV: *L'Afrique du XIIIe au XVIe siècle*, Paris: UNESCO/Nouvelles Éditions Africaines, pp. 669-691.
- NIK HASSAN SHUHAIMI BIN NIK ABDUL RAHMAN, 1990, "The kingdom of Srīvijaya as socio-political and cultural entity," in J. Kathirithamby-Wells and J. Villiers (eds.), *The Southeast Asian Port and Polity: Rise and Demise*, Singapore University Press, pp. 61-82.
- NILSSON, M. P., 1920, *Primitive Time Reckoning: A Study in the Origins and First Development of the Art of Counting Time among the Primitive and Early Culture Peoples*, Lund: C. W. K. Gleerup.
- NOIRET, F., 2008, *Le Mythe d'Ibonia le grand Prince (Madagascar)*, Teny fanolorana Solo-Raharinjanahary, Preface by N. J. Gueunier, Paris: Karthala.
- NOREL, P., 2004, *L'invention du marché: une histoire économique de la mondialisation*, Paris: Seuil.
- 2005, "Le développement est-il né en Asie?," *Économies et sociétés*, Développement, croissance et progrès series 43, pp. 415-459.
- 2007, "Espace mondial et émergence de systèmes nationaux de marchés," in R. Sobel (ed.), *Penser la marchandisation du monde avec Karl Polanyi*, Cahiers Lillois d'Économie et de Sociologie, Paris: L'Harmattan, pp. 37-61.
- 2009a, "Dynamique smithienne et création des institutions du capitalisme : une analyse des mondialisations antérieures à 1860," in P. Beaujard, L. Berger, and P. Norel (eds.), *Histoire globale, mondialisations et capitalisme*, Paris: La Découverte, pp. 374-402.
- 2009b, *L'histoire économique globale*, Paris: Seuil.

- 2009c, "Comment s'est construit le capitalisme? Les réponses de Braudel et de l'histoire économique globale," paper presented at the séminaire "Fernand Braudel, 'Civilisation matérielle, Économie et capitalisme', trente ans après," Institute of European and Global Studies, Leipzig, September.
- 2010, "Chine, un acteur global dans la longue durée," blogs.histoireglobale.com
- 2011, "Les relations économiques afro-asiatiques dans l'histoire globale," *Revue Tiers-Monde*, 4 (208), pp. 27–44.
- NOREL, P. and TESTOT, L. (eds.), 2012, *Une histoire du monde global*, Auxerre: Éditions Sciences Humaines.
- NORTH, D. C., 1977, "Markets and other allocation systems in history: the challenge of Karl Polanyi," *Journal of European Economic History*, 6, pp. 703–716.
- 1981, *Structure and Change in Economic History*, New York and London: W. W. Norton.
- 1991, "Institutions, transaction costs, and the rise of merchant empires," in J. D. Tracy (ed.), *The Political Economy of Merchant Empires*, Cambridge University Press, pp. 22–40.
- NURSE, D., 1983, "A linguistic reconsideration of Swahili origins," *Azania*, 18, pp. 127–150.
- NURSE, D. and HINNEBUSCH, T. J., 1993, *Swahili and Sabaki: A Linguistic History*, with an addendum by G. Philippson, Berkeley, Los Angeles, and London: University of California Press.
- NURSE, D. and SPEAR, T., 1985, *The Swahili: Reconstructing the History and Language of an African Society, 800–1500*, Philadelphia, PA: Pennsylvania University Press.
- OLIVER, R. and MATHEW, G., 1963, *History of East Africa*, vol. 1, Oxford: Clarendon Press.
- OSSENBRUGGEN, F. D. E. van, 1977, "Java's monca-pat: origins of a primitive classification system," in P. E. de Josselin de Jong (ed.), *Structural Anthropology in the Netherlands*, The Hague: Martinus Nijhoff, pp. 32–60 (1st edn. 1916).
- OTTINO, P., 1973, "La hiérarchie sociale et l'alliance dans le royaume de Matacassi des XVII^e et XVIII^e siècles," *ASEMI*, 4 (4), pp. 53–89.
- 1974a, "L'Océan Indien comme domaine de recherche," *L'Homme*, 3–4, pp. 143–151.
- 1974b, *Madagascar, les Comores et le sud-ouest de l'océan Indien*, publication du Centre d'Anthropologie culturelle et sociale, Antananarivo: Université de Madagascar.
- 1974c, "À propos de deux mythes malgaches du début du XVIII^e siècle," *Taloha*, 6, pp. 72–88.
- 1977, "Le thème du Monstre Dévorant dans les domaines malgache et bantou," *ASEMI*, 8 (3–4), "Langues, cultures et sociétés de l'océan Indien," pp. 219–251.
- 1981, "Madagascar: la mythologie malgache des Hautes Terres et le cycle politique des Andriambahoaka," in *Dictionnaire des mythologies*, vol. 11, Paris: Flammarion, pp. 30–45.
- 1983, "Les Andriambahoaka malgaches et l'héritage indonésien: mythe et histoire," in F. Raison-Jourde (ed.), *Les souverains de Madagascar: l'histoire royale et ses résurgences contemporaines*, Paris: Karthala, pp. 71–96.
- 1986, *L'Étrangère intime: essai d'anthropologie de la civilisation de l'ancien Madagascar*, 2 vols., Paris, Editions des Archives Contemporaines.
- 1998, *Les champs de l'ancestralité à Madagascar: parenté, alliance et patrimoine*, Paris: Karthala/ORSTOM.
- PACEY, A., 1990, *Technology in World Civilization*, Cambridge, MA: MIT Press.
- PALAT, R., 1986, "Popular revolts and the state in medieval South India: a study of the Vijayanagara empire (1360–1565)," *Bijdragen tot de Taal-, Land- en Volkenkunde*, 142 (1), pp. 128–144.
- 1988, "From world-empire to world-economy: southeastern India and the emergence of the Indian ocean world-economy, 1350–1650," Ph.D. dissertation, SUNY-Binghamton, Sociology Department.

- 1991, "Symbiotic sisters: Bay of Bengal ports in the Indian Ocean world economy," in R. Kasaba and I. Wallerstein (eds.), *Cities in the World-System: Studies in the Political Economy of the World-System*, Westport, CT: Greenwood Press, pp. 17–40.
- 2015, *The Making of an Indian Ocean World-Economy, 1250–1650: Princes, Paddy Fields and Bazaars*, London: Palgrave Macmillan.
- PALAT, R. A., and WALLERSTEIN, I., 1999, "Of what world-system was pre-1500 'India' a part?," in S. Chaudhury and M. Morineau (eds.), *Merchants, Companies and Trade: Europe and Asia in the Early Modern Era*, Paris: Maison des Sciences de l'Homme, and Cambridge University Press, pp. 21–41.
- PALSKY, G., 2009, "Un regard cartographique: le monde vu d'Europe, du xve au xxi^e siècle," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 791–811.
- PAMUK, S., 2005, "Urban real wages around the Eastern Mediterranean in comparative perspective, 1100–2000," *Research in Economic History*, 23, pp. 209–228.
- 2007, "The Black Death and the origins of 'the Great Divergence' across Europe, 1300–1600," *European Review of Economic History*, 11, pp. 289–317.
- PANNETIER, J., 1974, "Archéologie des pays antambahoaka et antemoro," *Taloha*, 6, pp. 57–69.
- PARANAVITANA, S., 1961, *A Concise History of Ceylon*, Colombo: Ceylon University Press.
- PARKER, G., 2002, "Ex Oriente luxuria: Indian commodities and Roman experience," *Journal of the Economic and Social History of the Orient*, 45 (1), pp. 39–95.
- PARKER PEARSON, M., 1992, "Tombs and monumentality in southern Madagascar: preliminary results of the central Androy survey," *Antiquity*, 66 (253), pp. 941–948.
- 1997, "Qui étaient les Ampatois? L'archéologie des développements politiques du xv^e au xix^e siècle en Androy," *Études Océan Indien*, 23–24 ("Autour d'Etienne de Flacourt. Actes du Colloque d'Orléans"), pp. 237–252.
- 2010, *Pastoralists, Warriors and Colonists: The Archaeology of Southern Madagascar*, BAR International Series 2139, Oxford: Archaeopress.
- 2011, "Tombs, landscape and society in southern Madagascar – part v," www.shef.ac.uk/archaeology/research/madagascar
- PARKER PEARSON, M. with GODDEN, K., HEURTEBIZE, G., RADIMILAHY, C., RAMILISONINA, RETSIHISATSE, SCHWENNINGER, J.-L., and SMITH, H., 2010, *Pastoralists, Warriors and Colonists: The Archaeology of Southern Madagascar* (BAR International Series S2139), Oxford: Archaeopress.
- PARKIN, D. and BARNES, R. (eds.), 2002, *Ships and the Development of Maritime Technology in the Indian Ocean*, London, New York, Routledge/Curzon.
- PARKINSON, W. A. and GALATY, M. L., 2007, "Secondary states in perspective: an integrated approach to state formation in the prehistoric Aegean," *American Anthropologist*, 109 (1), pp. 113–129.
- PARTANT, F., 1997, *La fin du développement. Naissance d'une alternative?*, Arles: Babel (1st edn. 1982).
- PARTINGTON, J. R., 1999, *A History of Greek Fire and Gunpowder*, Baltimore, Johns Hopkins University Press (1st edn. 1960).
- PATHMANATHAN, S., 2002, "The Nānādēsis in Anurādhapura: a unique bronze image of Virabhadra," in *Ancient and Medieval Commercial Activities in the Indian Ocean. Testimony of Inscriptions and Ceramic Sherds*, Tokyo: Taisho University, pp. 48–56.
- PAULME, D., 1942, "Systèmes pondéreux et monétaires en Afrique Noire," *La Revue Scientifique*, 3208, pp. 219–226.
- PEARSON, M. 1976. *Merchants and Rulers in Gujarat: The Response to the Portuguese in the Sixteenth Century*, Berkeley: University of California Press.

- 1987, "India and the Indian Ocean in the sixteenth century," in A. Das Gupta and M. N. Pearson (eds.), *India and the Indian ocean, 1500-1800*, Calcutta and Oxford: Oxford University Press, pp. 71-93.
- 1991, "Merchants and states," in J. D. Tracy (ed.), *The Political Economy of Merchant Empires*, Cambridge University Press, pp. 41-116.
- 1998, *Port Cities and Intruders: The Swahili Coast, India, and Portugal in the Early Modern Era*, Baltimore, MD, and London: Johns Hopkins University Press.
- 2000, "The Indian Ocean and the Red Sea," in N. Levtzion and R. L. Pouwels (eds.), *The History of Islam in Africa*, Athens, OH: Ohio University Press; Oxford: James Currey; Claremont: David Philip, pp. 37-59.
- 2001, "Asia and world precious metal flows in the early modern period," in J. McGuire, P. Bertola, and P. Reeves (eds.), *Evolution of the World Economy: Precious Metals and India*, Delhi: Oxford University Press, pp. 21-57.
- 2003, *The Indian Ocean*, London and New York: Routledge.
- 2015, *Trade, Circulation, and Flow in the Indian Ocean World*, London: Palgrave Macmillan.
- PELLIOT, P., 1904, "Deux itinéraires de Chine en Inde à la fin du VIII^e siècle," *Bulletin de l'Ecole française d'Extrême-Orient*, 4, pp. 131-413.
- 1923, "Les traditions manichéennes au Foukien," *T'oung Pao*, 22, pp. 193-208.
- 1925, "Quelques textes chinois concernant l'Indochine hindouisée," *Études Asiatiques*, 2, pp. 243-263.
- 1928, "Des artisans chinois à la capitale abbasside en 751-762," *T'oung Pao*, 2nd series, 26 (1-5), pp. 110-112.
- 1933, "Les grands voyages maritimes chinois au début du xve siècle," *T'oung Pao*, 2nd series, 30 (3-5), pp. 237-452.
- PELRAS, C., 1987, "Le ciel et les jours: constellations et calendriers agraires chez les Bugis," in B. Koechlin, F. Sigaut, J. M. C. Thomas, and G. Toffin (eds.), *De la voûte céleste au terroir, du jardin au foyer: textes offerts à Lucien Bernot*, Paris: EHESS, pp. 19-39.
- 1996, *The Bugis*, Oxford: Blackwell.
- PELRAS, C. and LOMBARD, D., 1981, "Héros culturels. Insulinde," in *Dictionnaire des mythologies*, vol. 1, Paris: Flammarion, pp. 512-518.
- PEREGRINE, P., 1991, "Prehistoric chiefdoms on the American mid-continent: a world system based on prestige goods," in C. Chase-Dunn and T. D. Hall (eds.), *Core/Periphery Relations in Precapitalist Worlds*, Boulder, CO: Westview Press, pp. 193-211.
- 1996, "Legitimation crises in premodern worlds," *Journal of World Systems Research*, 2 (6), http://jwsr.ucr.edu/archive/vol2/v2_n6.php
- PERKINS, J., 2015, "The Indian Ocean and Swahili coast coins, international networks and local developments," *Afriques*, "L'Afrique orientale et l'océan Indien: connexions, réseaux d'échanges et globalization," 6, <http://afriques.revues.org>
- PERLIN, F., 1985, "State formation reconsidered, part two," *Modern Asian Studies*, 19 (3), pp. 415-480.
- PERRIER, X., BAKRY, F., CARREEL, F., JENNY, C., HORRY, J.-P., LEBOT, V., and HIPPOLYTE, I., 2009, "Combining biological approaches to shed light on the evolution of edible bananas," *Ethnobotany Research & Applications*, 7, pp. 199-216.
- PERRIER DE LA BATHIE, H., 1933, *Les plantes introduites à Madagascar*, Toulouse: Imprimerie H. Bosuyan, pp. 5-80.
- PESCATELLO, A. M., 1977, "The African presence in Portuguese India," *Journal of Asian History*, 11, pp. 26-48.
- PÉTRÉ-GRENOUILLEAU, O., 2004, *Les traites négrières: essai d'histoire globale*, Paris: Gallimard.
- PHILIPPSON, G., 1981, "Glossaire des noms des principales plantes cultivées sur la côte d'Afrique orientale," *Bulletin des Études africaines de l'Inalco*, 1 (1), pp. 89-100.

- PHILIPPSON, G. and BAHUCHET, S., 1994–1995, “Cultivated crops and Bantu migrations in Central and Eastern Africa: A linguistic approach,” *Azania*, 29–30, pp. 103–120.
- PHILLIPS, H. P., 2016, *The History and Chronology of Gunpowder and Gunpowder Weapons*, Chennai: Notion Press.
- PHILLIPSON, D. W., 1984, “Les débuts de l’Age du fer en Afrique méridionale,” in G. Mokhtar (ed.), *Histoire générale de l’Afrique*, vol. II: *Afrique ancienne*, Paris: Jeune Afrique/UNESCO, pp. 729–749.
- 1998, *Ancient Ethiopia: Aksum, Its Antecedents and Successors*, London: British Museum Press.
- 2012, *Foundations of an African Civilisation: Aksum and the Northern Horn 1000 BC – AD 1300*, Woodbridge: James Currey; University of Rochester Press.
- PIKIRAYI, I., 2001, *The Zimbabwe Culture: Origins and Decline in Southern Zambezian States*, Walnut Creek, CA: Altamira Press.
- PIRENNE, H., 1939, *Mohammed and Charlemagne*, London: George Allen and Unwin.
- 2005, *Mahomet et Charlemagne*, version numérique, www.uqac.ca/classiques_des_sciences_sociales, Chicoutimi, J.-M. Tremblay (1st edn. Brussels 1937).
- PIRES, T.: see CORTESÃO.
- PIRIYA, K., 1991, “Towards a revised history of Sukhothai art: a reassessment of the inscription of King Ram Khamhaeng,” in J. R. Chamberlain (ed.), *The Ram Khamhaeng Controversy: Selected Papers*, Bangkok: The Siam Society, pp. 53–160.
- PLANHOL, X. de, 1968, *Les fondements géographiques de l’histoire de l’islam*, Paris: Flammarion.
- PLUVIER, J. M., 1995, *Historical Atlas of South-East Asia*, Leiden: E. J. Brill.
- POCKTSY, J. L., LUMARET, R., MAYNE, D., MOHAMED, VA., ABUTABA, YIM, SAGNA, M., RAOSETA, S., and DANTHU, P., 2009, “Chloroplast DNA phylogeography suggests a West African centre of origin for the baobab, *Adansonia digitata* L (Bombacoideae, Malvaceae),” *Molecular Ecology*, 18, pp. 1707–1715.
- POIRIER, J., 1979, “Problèmes de la mise en place des couches ethniques et des couches culturelles à Madagascar,” in *Mouvements de populations dans l’océan Indien*, Paris: Librairie Honoré Champion, pp. 51–60.
- POLANYI, K., 1957a, *The Great Transformation: The Political and Economic Origins of Our Time*, Boston, MA: Beacon Press (1st edn. 1944).
- 1957b, “Marketless trading in Hammurabi’s time,” in C. Arensberg, H. W. Pearson, and K. Polanyi (eds.), *Trade and Market in Early Empires*, Glencoe, IL: Free Press, pp. 12–26.
- 1975, “Traders and trade,” in J. A. Sabloff and C. C. Lamberg-Karlovsky (eds.), *Ancient Civilization and Trade*, Albuquerque: University of New Mexico Press, pp. 133–154.
- POLLOCK, S., 2006, *The Language of the Gods in the World of Men: Sanskrit, Culture, and Power in Premodern India*, Berkeley, Los Angeles, and London: University of California Press.
- POLO, M., 1845, *The Travels of Marco Polo*, ed. H. Murray, Edinburgh: Oliver and Boyd.
- 1980, *Le devisement du monde. Le livre des merveilles*, ed. A.-C. Moule and P. Pelliot, trans. L. Hambis, introduction and notes by S. Yerasimos, Paris: Maspéro.
- 1982, *The Travels of Marco Polo*, London: André Deutsch (1st edn. 1959).
- 1998, *La description du monde*, ed. and trans. P.-Y. Badel, Paris: Librairie générale française.
- 2003, *The Travels of Marco Polo the Venetian*, ed. J. Masfield, New Delhi and Chennai: Asian Educational Services (1st edn. 1931).
- 2005, *The Travels of Marco Polo, Translated into English from the Text of L. F. Benedetto*, ed. A. Ricci, London and New York, Routledge/Curzon (1st edn. 1931).
- 2009, *Le devisement du monde*, vol. VI: *Livre d’Ynde. Retour vers l’Occident*, ed. P. Ménard, D. Boutet, T. Delcourt, and D. James-Raoul, Geneva: Droz.
- POMERANZ, K., 2000, *The Great Divergence: China, Europe and the Making of the Modern World Economy*, Princeton University Press.

- 2001, "Is there an East Asian development path? Long-term comparisons, constraints and continuities," *Journal of the Economic and Social History of the Orient*, 44 (3), pp. 322–362.
- 2009a, "Le machinisme induit-il une discontinuité historique? Industrialisation, modernité précoce et formes du changement économique dans l'histoire globale," in P. Beaujard, L. Berger, and P. Norel (eds.), *Histoire globale, mondialisations et capitalisme*, Paris: La Découverte, pp. 335–373.
- 2009b, "The transformation of China's environment, 1500–2000," in E. Burke III and K. Pomeranz (eds.), *The Environment and World History*, Berkeley, Los Angeles, and London: University of California Press, pp. 118–164.
- POMERANZ, K. and TOPIK, S., 1999, *The World that Trade Created: Society, Culture and the World Economy, 1400 to the Present*, Armonk, NY: M. E. Sharpe.
- PONTING, C., 2007, *Gunpowder: An Explosive History – from the Alchemists of China to the Battlefields of Europe*, London: Pimlico.
- POPOVIC, A., 1976, *La révolte des esclaves en Iraq au IIIe/IXe siècle*, Paris: P. Geuthner.
- PORTER, T., 1995, "Innovation in global finance: the impact on hegemony and growth since 1000 AD," *Review: A Journal of the Fernand Braudel Center for the Study of Economics, Historical Systems, and Civilizations*, 18 (3), pp. 387–429.
- 2002, "The ports of Yemen and the Indian Ocean during the Tahirid period (1454–1517)," in J. F. Healey and V. Porter (eds.), *Studies on Arabia in Honour of Professor G. Rex Smith*, Oxford University Press, pp. 171–189.
- PORTÈRES, R., 1960, "La sombre Aroidée cultivée: *Colocasia antiquorum* Schott. ou taro de Polynésie. Essai d'étymologie sémantique," *Journal d'Agriculture Tropicale et de Botanique Appliquée*, 7, 4–5, pp. 169–192.
- POTTIER, C., 2005, "Avant Angkor: découvertes récentes," *Dossiers d'Archéologie*, 302, pp. 82–87.
- POUMAILLOUX, P., 2001, "L'énigme des Zimba: problématique et interprétations," *Études Océan Indien*, 31, pp. 147–163.
- 2002, "Une étude raisonnée de la côte orientale d'Afrique à la fin du XVIIe siècle, à travers l'Ethiopia Oriental du Père João dos Santos," Ph.D. thesis, Institut National des Langues et Civilisations Orientales.
- POUWELS, R. L., 1987, *Horn and Crescent, Cultural Change and Traditional Islam on the East African Coast, 800–1900*, Cambridge University Press.
- 1991, "The battle of Shela: the climax of an era and a point of departure in the modern history of the Kenya coast," *Cahiers d'Études Africaines*, 31 (3), pp. 363–389.
- 2000, "The East African coast c. 780 to 1900 CE," in N. Levtzion and R. L. Pouwels (eds.), *The History of Islam in Africa*, Athens, OH: Ohio University Press; Oxford: James Currey; Claremont: David Philip, pp. 251–271.
- 2002, "Eastern Africa and the Indian Ocean to 1800: reviewing relations in historical perspective," *International Journal of African Historical Studies*, 35 (2–3), pp. 385–425.
- 2003, "Bulletin critique," *Afrique et Histoire*, 1, pp. 271–301.
- POWELL, J. G. F. (ed.), 1995, *Cicero the Philosopher: Twelve Papers*, Oxford: Clarendon Press.
- PRADINES, S., 2001, "Fortifications et urbanisation swahili: l'exemple de la cité de Gedi (Kenya)," Ph.D. thesis, Université de la Sorbonne-Paris IV, Art et archéologie islamique.
- 2003, "Le mihrāb swahili: l'évolution d'une architecture islamique en Afrique subsaharienne," *Annales Islamologiques*, 37, pp. 355–382.
- 2006, "Sanjé ya Kati, Kilwa, Tanzanie, 2005–2006," *Nyame Akuma: Bulletin of the Society of Africanist Archaeologists*, 66, pp. 64–70.
- 2009, "L'île de Sanjé ya Kati (Kilwa, Tanzanie): un mythe Shirāzi bien réel," *Azania*, 44 (1), pp. 49–73.
- 2012, "Dembeni, Mayotte (976): archéologie swahilie dans un département français," *Nyame Akuma*, 77, pp. 68–81.

- PRANGE, S. R., 2006, "‘Trust in God but tie your camel first’: the economic organization of the trans-Saharan slave trade between the fourteenth and nineteenth centuries," *Journal of Global History*, 1, pp. 219–239.
- PRESTHOLDT, J., 1998, "As artistry permits and custom may ordain: the social fabric of material consumption in the Swahili world, circa 1450 to 1600," *Program of African Studies Working Papers*, 3, Evanston, IL: Northwestern University.
- PRINS, A. H. J., 1961, *The Swahili-Speaking Peoples of Zanzibar and the East African Coast*, London: International African Institute.
- 1971, *Didemic Lamu, Social Stratification and Spatial Structure in a Muslim Maritime Town*, Groningen: Instituut voor Culturele Antropologie der Rijksuniversiteit.
- PRYOR, J., 1977, "The origins of the commenda contract," *Speculum*, 52 (1), pp. 5–37.
- PTAK, R., 1993a, "China and the trade in cloves, circa 960–1435," *Journal of the American Oriental Society*, 113, pp. 1–13.
- 1993b, "Yuan and Early Ming notices on the Kayal area in South India," *Bulletin de l'École française d'Extrême-Orient*, 80 (1), pp. 137–156.
- 1998, "From Quanzhou to the Zulu zone and beyond: questions related to the early fourteenth century," *Journal of Southeast Asian Studies*, 29 (2), pp. 269–294.
- 1999, "Asian trade in cloves, circa 1500: quantities and trade routes – a synopsis of Portuguese and Other Sources," in R. Ptak (ed.), *Chinese Seaborne Trade with South and Southeast Asia (1200–1750)*, Aldershot: Ashgate, pp. 149–169.
- 2012, "The Ryukyu network in the fifteenth and early sixteenth centuries," in D. P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization*, vol. III, part 7, O. Prakash (ed.), *The Trading World of the Indian Ocean, 1500–1800*, Delhi, Chennai, and Chandigarh: Centre for Studies in Civilizations, pp. 462–482.
- PTAK, R. and KAUZ, R., 2001, "Hormuz in Yuan and Ming sources," *Bulletin de l'École française d'Extrême-Orient*, 88, pp. 22–75.
- PTAK, R. and ROTHERMUND, D. (eds.), 1991, *Emporia, Commodities and Entrepreneurs in Asian Maritime trade, c. 1400–1750*, Stuttgart: Franz Steiner.
- PTOLEMY, 1883–1901, *Claudii Ptolemaei Geographia* (Greek and Latin), ed. K. Müller and C. T. Fischer, 2 vols., Paris.
- 1991, *Geography of Claudius Ptolemy*, trans. E. L. Stevenson, New York: Dover (1st edn. 1932).
- 2000, *Ptolemy's Geography*, trans. J. L. Berggren and A. Jones, Princeton University Press.
- PURCHAS, S., 1613, *Purchas, His Pilgrimage; or, Relations of the World and the Religions Observed in all Ages and Places Discovered*, London: William Stansby.
- PWITI, G., 2005, "Southern Africa and the East African coast," in A. B. Stahl (ed.), *African Archaeology: A Critical Introduction*, Malden, MA, and Oxford: Blackwell, pp. 378–391.
- PYDYN, A., 2000, "Value and exchange of bronzes in the Baltic area and in north-east Europe," in C. F. E. Pare (ed.), *Metals Make the World Go Round: The Supply and Circulation of Metals in Bronze Age Europe. Proceedings of a Conference Held at the University of Birmingham in June 1997*, Oxford: Oxbow Books, pp. 225–232.
- PYRARD DE LAVAL, F., 1887, *The Voyage of François Pyrard of Laval to the East Indies, the Maldives, the Moluccas and Brazil*, trans. and ed. A. Gray, 2 vols., London: Hakluyt Society.
- QI DONGFANG, 2010, "Gold and silver wares on the Belitung shipwreck," in R. Krahl, J. Guy, J. K. Wilson, and J. Raby (eds.), *Shipwrecked Tang Treasures and Monsoon Winds*, Washington, DC: Arthur M. Sackler Gallery, The Smithsonian's Museum of Asian Art; Singapore: National Heritage Board, Singapore, and Singapore Tourism Board, pp. 221–227.
- QUINN, W. H., 1992, "A study of Southern Oscillation-related climatic activity for AD 622–1900 incorporating Nile River flood data," in H. F. Diaz and V. Markgraf (eds.), *El Niño: Historical and Paleoclimatic Aspects of the Southern Oscillation*, Cambridge University Press, pp. 119–149.

- RABEDAORO, S., 1966, "La semaine d'années à Madagascar," *Revue de Madagascar*, 33, pp. 19–25.
- RABIE, H., 1972, *The Financial System of Egypt, A.H. 564–741/AD 1169–1341*, Oxford University Press.
- RADANIELINA, T., RAMANANTSOANIRINA, A., RABOIN, L.-M., FROUIN, J., PERRIER, X., BRABANT, P., and AHMAD, N., 2012, "The original features of rice (*Oryza sativa* L.) genetic diversity and the importance of within-variety diversity in the highlands of Madagascar build a strong case for in situ conservation," *Genetic Resources and Crop Evolution*, doi:10.1007/s10722-012-9837-3.
- RADIMILAHY, C., 1981, "Archéologie de l'Androy – Sud de Madagascar," *Recherche, Pédagogie et Culture*, 9 (*Archéologie en Afrique* 55), pp. 62–65.
- 1988, *L'ancienne métallurgie du fer à Madagascar*, British Archaeological Reports, Oxford: Archaeopress.
- 1998, *Mahilaka: An Archaeological Investigation of an Early Town in Northwestern Madagascar*, Department of Archaeology and Ancient History, Uppsala, University.
- RAFOLO, A., 1989–1990a, "Les fouilles de Lohavohitra: contribution à l'étude des aménagements d'un site ancien fortifié et perché du Vonizongo," *Omaly sy Anio (Hier et Aujourd'hui)*, 29–32, pp. 57–70.
- 1989–1990b, "Essai d'interprétation des restes osseux animaux des fouilles d'Ambohimananana," *Nouvelles du Centre d'Art and d'Archéologie*, 7–8, pp. 42–50.
- 1994, "Les expressions matérielles du pouvoir dans les sites archéologiques malgaches des Hautes Terres (XIIIe–XVIIIe siècles)," in O. Redon and B. Rosenberger (eds.), *Les Assises du Pouvoir: Temps médiévaux, territoires africains*, Paris: Presses Universitaires de Vincennes, pp. 91–107.
- 2000, "Histoire des échanges et archéologie du Sud-Ouest de l'océan Indien: l'exemple de la porcelaine chinoise bleu and blanc de Madagascar," in S. Evers and V. Hookoomsing (eds.), *Globalization and the Southwest Indian Ocean*, IIAS, University of Mauritius, pp. 129–138.
- RAHMSTORF, S., 2003, "Timing of abrupt climate change: a precise clock," *Geophysical Research Letters*, 30 (10), 1510, doi:10.1029/2003GL017115.
- RAISON-JOURDE, F., 1983a and b, "Introduction" and "De la restauration des talismans royaux au baptême de 1869 en Imerina. Une tentative de légitimation des rapports entre pouvoir royal dominé et pouvoir d'état hova dominant au milieu du xxe siècle," in F. Raison-Jourde (ed.), *Les souverains de Madagascar: l'histoire royale et ses résurgences contemporaines*, Paris: Karthala, pp. 7–68 and 337–369.
- (ed.), 1983, *Les souverains de Madagascar: l'histoire royale et ses résurgences contemporaines*, Paris: Karthala.
- 1991, *Bible et pouvoir à Madagascar au XIXe siècle*, Paris: Karthala.
- RAISON, J.-P., 1984, *Les hautes terres de Madagascar et leurs confins occidentaux. enracinement et mobilité des sociétés rurales*, 2 vols., Paris: ORSTOM/Karthala.
- RAJAONARIMANANA, N., 1990, "Sorabe: traités divinatoires et recettes médico-magiques de la tradition malgache antemoro," Ph.D. thesis, INALCO, 4 vols.
- RAKOTOARISOA, J.-A., 1994a, "Le peuplement de l'Anosy: les rapports de l'homme et de son environnement dans l'Extrême-Sud-Est de Madagascar," Ph.D. thesis, INALCO.
- 1994b, "Archéologie des Hautes Terres centrales: problèmes et méthodes," *Taloha*, 12, pp. 25–36.
- 1998, *Mille ans d'occupation humaine dans le Sud-Est de Madagascar: Anosy, une île au milieu des terres*, Paris: L'Harmattan.
- RAKOTOMALALA, M., BLANCHY, S., and RAISON-JOURDE, F., 2001, *Madagascar: les ancêtres au quotidien. Usages sociaux du religieux sur les Hautes-Terres malgaches*, Paris, L'Harmattan.
- RAKOTOVOLOLONA, S., 1994, "Ankadivory: témoin d'une culture de l'Imerina ancienne," *Taloha*, 12, pp. 7–24.

- RAKOTOZAFY, L. M. A., 1996, "Étude de la constitution du régime alimentaire des habitants du site de Mahilaka du 11^e au 14^e siècles à partir des produits de fouilles archéologiques," Ph.D thesis, Université d'Antananarivo.
- RAMASWAMY, V., 1985, *Textiles and Weavers in Medieval South India*, Delhi: Oxford University Press.
- 2002, "Interactions and encounters : Indian looms and crafts traditions abroad – a South Indian perspective," in D. P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization*, vol. III, part 2, A. Rahman (ed.), *India's Interaction with China, Central and West Asia*, Delhi: Oxford University Press, pp. 428–444.
- RAMILISON, E., 1951–1952, *Ny loharanon'ny Andriana nanjaka teto Imerina. Andriantomara. Andriamamilaza*, Antananarivo: Ankehitriny.
- RAMILISONINA, 1990, "Essai d'approche pour la connaissance de l'urbanisation à Madagascar: exemple de Mandialaza," in *Urban Origins in Eastern Africa: Working Papers 1989*, Stockholm: Central Board of National Antiquities, pp. 90–93.
- 1993, "Quelques aspects de l'urbanisation en pays Bezanozano Mandialaza (XIII^e–XIX^e siècle)," *Données archéologiques sur l'origine des villes à Madagascar*, Antananarivo: Musée d'Art et d'Archéologie, pp. 95–131.
- RANDLES, W. G. L., 1975, *L'empire du Monomotapa du XV^e au XIX^e siècle*, Paris: Mouton.
- RANTOANDRO, G., 2002, "Des royaumes concentriques de Java au 'royaume de Madagascar': les fondements d'un héritage présumé," in F. Raison-Jourde and S. Randrianja (eds.), *La nation malgache au défi de l'ethnicité*, Paris: Karthala, pp. 107–124.
- RAO, V. N., SHULMAN, D., and SUBRAHMANYAM, S., 1992, *Symbols of Substance: Court and State in Nayaka Period Tamil Nadu*, New Delhi: Oxford University Press.
- RAS, J. J., 1968, *Hikayat Banjar. A Study in Malay Historiography*, The Hague: Martinus Nijhoff.
- 2001, "Sacral kingship in Java," in M. J. Klokke and K. R. Van Kooij (eds.), *Fruits of Inspiration: Studies in Honour of Prof. J. G. De Casparis, Retired Professor of the Early History and Archeology of South and Southeast Asia at the University of Leiden, the Netherlands, on the Occasion of His 85th Birthday*, Groningen: Egbert Forstein, pp. 373–388.
- RASAMUEL, D., 1982, "Une fouille à Ambohitrikanjaka en 1979," *Taloha*, 8, pp. 7–24.
- 1984a, "L'Ancien Fanongoavana," Thèse de 3^e cycle, Université de Paris 1.
- 1984b, "Alimentation et techniques anciennes dans le sud malgache à travers une fosse à ordures du XI^e siècle," *Tsiokantimo-Études Océan Indien*, 4, pp. 81–109.
- 1988, "Les fouilles d'Ambohimananana (campagne de fouilles de 1987)," *Bulletin de l'Académie Malgache*, 66 (1–2), pp. 55–58.
- 1989–1990, "Introduction aux recherches sur Ambohimananana," *Nouvelles du Centre d'Art et d'Archéologie*, 7–8, pp. 25–41.
- 2000, "Archéologie et méthodes: un exemple de Madagascar," paper presented at the seminar "Préhistoire et Archéologie de l'Afrique," Centre de Recherches Africaines-Université de Paris 1, December 14, 2000.
- 2001, "Les fouilles d'Ambohimananana: céramique et site," *Tarehi*, 2, pp. 19–23.
- 2007, *Fanongoavana: une capitale princière malgache du XIV^e siècle*, Paris: Arguments; Versailles: Quae.
- RASELIMANANA, A. P. and VENCES, M., 2003, "Introduced reptiles and amphibians," in S. M. Goodman and J. P. Benstead (eds.), *The Natural History of Madagascar*, University of Chicago Press, pp. 949–951.
- RASOARIFETRA, B. N., 2009, "Le Rova d'Antananarivo: une lecture du passé pour l'avenir (Histoire-Archéologie-Patrimoine)," Thèse, Paris, Institut National des Langues and Civilisations Orientales.

- RASPOPOV, O. M., *et al.*, 2008, "The influence of the de Vries (200-year) solar cycle on climate variations: results from the Central Asian Mountains and their global link," *ScienceDirect*, 259, pp. 6–16.
- RATHBONE, D., 1991, *Economic Rationalism and Rural Society in Third-Century AD Egypt: The Heronimos Archive and the Appianus Estate*, Cambridge University Press.
- RAY, H., 1993, *Trade and Diplomacy in India-China Relations: A Study of Bengal during the Fifteenth Century*, New Delhi: Sangam Books.
- 1996, "Indian settlements in China: an exploration of the phenomenon of Indian diaspora from AD 1015 to 1487," in K. S. Mathew (ed.), *Indian Ocean and Cultural Interaction*, Pondicherry University, pp. 52–81.
- RAY, H. P., 1987, "An analysis of the Chinese maritime voyages into the Indian Ocean during the Early Ming Dynasty and their raison d'être," *China Reports*, 23, pp. 65–87.
- 1999a, "Orissa in chinese historical records," in K. S. Behera (ed.), *Maritime Heritage of India*, New Delhi: Aryan Books, pp. 225–235.
- 1999b and c, "Preamble" and "The legacy of Childe and the archaeology of coastal sites," in H. P. Ray (ed.), *Archaeology of Seafaring: The Indian Ocean in the Ancient Period*, New Delh: Pragati, pp. 1–21 and 313–324.
- 2002a and b, "Shipping in the Indian Ocean: an overview" and "Seafaring in peninsular India in the ancient period: of watercraft and maritime communities," in D. Parkin and R. Barnes (eds.), *Ships and the Development of Maritime Technology in the Indian Ocean*, London and New York: Routledge/Curzon, pp. 1–27 and 62–91.
- 2003, *The Archaeology of Seafaring in Ancient South Asia*, Cambridge University Press.
- 2006, "Inscribed pots, emerging identities: the social milieu of trade," in P. Olivelle (ed.), *Between the Empires: Society in India 300 BCE to 400 CE*, New York: Oxford University Press, pp. 113–143.
- RAY, H. P. and SALLES, J.-F., 1996, *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, New Delhi: Manohar.
- RAYCHAUDHURI, T. and HABIB, L. (eds.), 1982, *The Cambridge Economic History of India*, vol. 1: c. 1200–c. 1750, Cambridge University Press.
- READE, J., 2008, "The Indus–Mesopotamian relationship reconsidered," in E. Olijdam and R. H. Spoor (eds.), *Intercultural Relations between South and Southwest Asia: Studies in Commemoration of E. C. L. During Caspers (1934–1996)*, BAR International Series 1826, Oxford: Archaeopress, pp. 12–18.
- REDDING, R. W. and GOODMAN, S. M., 1984, "Reptile, bird and mammal remains," in H. T. Wright (ed.), "Early seafarers of the Comoro Islands: the Dembeni Phase of the IXth–Xth centuries AD," *Azania*, 19, pp. 51–54.
- REDDY, K., 2006, *General Studies, History*, New Delhi: Tata McGraw-Hill.
- REGERT, M., DEVIÈSE, T., LE HÔ, A.-S., and ROUGEULLE, A., 2008, "Reconstructing ancient Yemeni commercial routes during the Middle Ages using structural characterization of terpenoid resins," *Archaeometry*, 50 (4), pp. 668–695.
- REGERT, M., SALQUE, M., DEVIÈSE, T., and LE HÔ, A.-S., 2015, "Les résines végétales de type copal et encens: caractérisation, exploitation et circuits commerciaux," in A. Rougeulle (ed.), *Sharma: un entrepôt de transit médiéval sur la côte du Hadramawt (Yémen, c. 980–1180)*, Oxford: Archaeopress, pp. 395–416.
- REID, A., 1988 and 1993a, *Southeast Asia in the Age of Commerce 1450–1680*, vol. 1: *The Lands below the Winds*, vol. 11: *Expansion and Crisis*, New Haven, CT, and London: Yale University Press.
- 1993b, "Introduction: a time and a place," in A. Reid (ed.), *Southeast Asia in the Early Modern Era*, Ithaca, NY, and London: Cornell University Press, pp. 1–19.
- 1997, *The Last Stand of Asian Autonomies: Responses to Modernity in the Diverse States of Southeast Asia and Korea, 1750–1900*, Basingstoke: Palgrave Macmillan.

- 1999, *Charting the Shape of Early Modern Southeast Asia*, Bangkok: Silkworm Books.
- 2001, "Understanding Melayu (Malay) as a source of diverse modern identities," *Journal of Southeast Asian Studies*, 32 (3), pp. 295–330.
- 2006, "Hybrid identities in the fifteenth-century straits of Malacca," *Asia Research Institute Working Paper Series*, 67.
- 2009, "Southeast Asian consumption of Indian and British cotton cloth, 1600–1850," in G. Riello and T. Roy (eds.), *How India Clothed the World: The World of South Asian Textiles, 1500–1850*, Leiden: Brill, pp. 31–51.
- REID, D. A. M. and SEGOBYE, A., 2000, "An ivory cache from Botswana," *Antiquity*, 74 (284), pp. 326–331.
- Relation de la Chine et de l'Inde, 'Akbār as-šin wa l-hind*, anon., ed. J. Sauvaget, 1948, Paris: Les Belles Lettres.
- RENEL, C., 1930, *Contes de Madagascar, tome III, Contes populaires*, Paris: E. Leroux.
- RENFREW, C., 1972, *The Emergence of Civilization: Cyclades and the Aegean in the Third Millennium BC*, London: Methuen.
- RENOU, L. and FILLIOZAT, J., 1953, *L'Inde classique: manuel des études indiennes*, vol. II, Paris: Imprimerie Nationale.
- REY, P.-P., 1996, "Islamisation de l'Afrique Noire et du Maghreb," Séminaires à l'Université Paris-VIII.
- 1998, "Les gens de l'or et leur idéologie: l'itinéraire d'Ibn Battûta en Afrique occidentale au XIV^e siècle," in B. Schlemmer (ed.), *Terrains et engagements de Claude Meillassoux*, Paris: Karthala, pp. 121–155.
- RIAZUDDIN, A., 1988, *History of Handicrafts: Pakistan-India*, Islamabad: National Hijra Council.
- RICHARDS, A., 1981, *An Iban-English Dictionary*, Oxford: Clarendon Press.
- RICHARDS, J. F., 1983a and b, "Introduction" and "Outflows of precious metals from early Islamic India," in J. F. Richards (ed.), *Precious Metals in the Later Medieval and Early Modern Worlds*, Durham, NC: Carolina Academic Press, pp. 3–26 and 185–205.
- 1983c (ed.), *Precious Metals in the Later Medieval and Early Modern Worlds*, Durham, NC: Carolina Academic Press.
- 1994, "The economic history of the Lodi period : 1451–1526," in S. Subrahmanyam (ed.), *Money and the Market in India 1100–1700*, Delhi: Oxford University Press, pp. 137–155.
- RICHARDSON, J., 1829, *Dictionary, Persian, Arabic, and English*, London: J. L. Cox.
- RICKS, T. M., 1970, "Persian Gulf seafaring and East Africa: ninth to twelfth centuries," *African Historical Studies*, 3 (2), pp. 339–357.
- ROBB, P., 2002, *A History of India*, New York: Palgrave.
- ROBERTSHAW, P., 1997, "Munsa earthworks: a preliminary report on recent excavations," *Azania*, 32, pp. 1–20.
- 2003, "The origins of the state in East Africa," in C. M. Kusimba and S. B. Kusimba (eds.), *East African Archaeology*, Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology, pp. 149–166.
- 2009, "African archaeology in world perspective," in S. Falconer and C. Redman (eds.), *Politics and Power: Archaeological Perspectives on the Landscapes of Early States*, Tucson: University of Arizona Press, pp. 208–220.
- ROBERTSHAW, P., RASOARIFETRA, B., WOOD, M., MELCHIORRE, E., POPELKA-FILCOFF, R. S., and GLASCOCK, M. D., 2006, "Chemical analysis of glass beads from Madagascar," *Journal of African Archaeology*, 4 (1), pp. 91–109.
- ROBERTSHAW, P., WOOD, M., MELCHIORRE, E., POPELKA-FILCOFF, R. S., and GLASCOCK, M. D., 2010, "Southern African glass beads: chemistry, glass sources and patterns of trade," *Journal of Archaeological Science*, 37, pp. 1898–1912.

- ROBERTSHAW, P., WOOD, M., POPELKA-FILCOFF, R. S., and GLASCOCK, M. D., 2006, "Glass beads of southern Africa and Indian Ocean trading networks," paper presented at the Biennial Conference of the Society of Africanist Archaeologists, Calgary, June.
- ROBERTSON, J., 2015, *Iraq: A History*, London: Oneworld Publications.
- ROCKHILL, W. W., 1913, 1914, 1915, "Notes on the relations and trade of China with the eastern archipelago and the coast of the Indian Ocean during the fourteenth century," *T'oung Pao*, 14 (1913), pp. 473-476; 15 (1914), pp. 419-447; 16 (1915), pp. 61-159, 234-271, 374-392, 435-467, 604-626.
- RODINSON, M., 1962, "La lune chez les Arabes et dans l'islam," in *La lune, mythes et rites*, Paris: Seuil, pp. 151-215.
- 1966, *Islam et capitalisme*, Paris: Seuil.
- 1970, "Le marchand musulman," in D. S. Richards (ed.), *Islam and the Trade of Asia: A Colloquium*, Oxford: Cassirer; Philadelphia: University of Pennsylvania Press, pp. 23-36.
- ROITMAN, J. and WARNIER, J.-P., 2006, "La politique de la valeur, une introduction," *Journal des Africanistes*, 76 (1), pp. 205-216.
- ROLLAND, D., 1974, "Introduction à une anthropologie de la basse-Matitana," *Taloha*, 6 ("Civilisation de l'Est et du Sud-Est: archéologie, anthropologie sociale et art de Madagascar"), pp. 39-52.
- ROMBAKA, J. P., 1957, *Tantaran-drazana: Anteimoro-Anteony*, ed. H. Randzavola, Antananarivo (1st edn. 1933).
- RONAN, C. A., 1986, *The Shorter Science and Civilisation in China: An Abridgment of Joseph Needham's Original Text*, vol. III, Cambridge University Press.
- 1988, *Histoire mondiale des sciences*, Paris: Seuil (1st edn. 1983).
- ROSENBERGER, B., 2000a, "La pratique du commerce," in J. C. Garcin *et al.* (eds.), *États, sociétés et cultures du monde musulman médiéval*, vol. II, Paris: PUF, pp. 245-273.
- 2000b, "Variations économiques et diversité du monde musulman," in J. C. Garcin *et al.* (eds.), *États, sociétés et cultures du monde musulman médiéval*, vol. III, Paris: PUF, pp. 111-121.
- ROSPABÉ, P., 1995, *La dette de vie – aux origines de la monnaie*, Preface by Alain Caillé, Bibliothèque du Mauss, "Recherches," Paris: Éditions de la Découverte.
- ROSSABI, M., 1990, "The 'decline' of the Central Asian caravan trade," in J. D. Tracy (ed.), *The Rise of Merchant Empires: Long-Distance Trade in the Early Modern World, 1350-1750*, Cambridge University Press, pp. 351-370.
- ROTHERMUND, D., 1988, *An Economic History of India*, London: Croom Helm.
- 1991, "Asian emporia and European bridgeheads," in R. Ptak and D. Rothermund (eds.), *Emporia, Commodities and Entrepreneurs in Asian Maritime Trade, c. 1400-1750*, Stuttgart: Franz Steiner, pp. 3-8.
- ROTHMAN, M. S., 2001a and b, "The local and the regional: an introduction" and "The Tigris Piedmont, Eastern Jazira, and Highland Western Iran in the fourth millennium BC," in M. S. Rothman (ed.), *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, Sante Fe: School of American Research; Oxford: James Currey, pp. 3-24 and 349-402.
- ROTTER, G., 1976, *Eine Arabische Komoren-Chronik des 19. Jahrhunderts, Muslimische Inseln vor Ostafrika*, Beirut and Wiesbaden: Franz Steiner.
- ROUGEULLE, A., 1991, "Les importations extrême-orientales trouvées sur les sites de la période abbasside: contribution à l'étude du commerce moyen-oriental au Moyen-Âge," Thèse de 3e cycle, Université de la Sorbonne-Paris IV.
- 1996, "Medieval trade networks in the Western Indian ocean (8-14th centuries): some reflections from the distribution pattern of Chinese imports in the Islamic world," in H. P. Ray and J.-F. Salles (eds.), *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, Delhi: Manohar, pp. 159-180.

- 2001, "Les ports de l'océan Indien," *Dossiers d'Archéologie*, 263, "Yémen," pp. 72–77.
- 2003, "Excavations at Sharmah, Hadramawt: the 2001 and 2002 seasons," *Proceedings of the Seminar for Arabian Studies*, 33, pp. 287–307.
- 2004, "Le Yémen entre Orient and Afrique: Šarma, un entrepôt du commerce maritime médiéval sur la côte sud de l'Arabie," *Annales Islamologiques*, 38, pp. 201–253.
- (ed.), 2015, *Sharma: un entrepôt de commerce médiéval sur la côte du Hadramawt (Yémen, ca 980–1180)*, Oxford: Archaeopress Publishing.
- ROUX, J.-P., 2003, "Quand les Bulgares ne sont ni slaves ni balkaniques," www.clio.fr/BIBLIOTHEQUE/
- RUDNER, D., 1994, *Caste and Capitalism in Colonial India: The Nattukottai Chettiars*, Berkeley: University of California Press.
- RUNCIMAN, S., 1958, *The Sicilian Vespers: A History of the Mediterranean World in the Later Thirteenth Century*, New York: Cambridge University Press.
- RUUD, J., 1970, *Taboo: A Study of Malagasy Customs and Beliefs*, Oslo University Press; New York: Humanities Press.
- SACHAU, E., 1962, *Alberuni's India: An Account of the Religion, Philosophy, Literature, Geography, Chronology, Customs, Laws, and Astrology of India about AD 1030*, Lahore, vol. 1 (1st edn. 1910 London).
- SACHS, C., 1938, *Les instruments de musique à Madagascar*, Paris: Institut d'Ethnologie.
- SACLEUX, C., 1939, *Dictionnaire Swahili-Français*, Paris: Institut d'Ethnologie.
- SAITOWITZ, S. J. and REID, D. L., 2001, "Early Indian Ocean glass bead trade between Egypt and Malaysia: a pilot study," *Bulletin of the Indo-Pacific Prehistory Association*, 21 (The Melaka Papers 5), pp. 119–123.
- SALIBA, G., 2007, *Islamic Science and the Making of the European Renaissance*, Cambridge, MA: MIT Press.
- SALLES, J.-F., 1996a, "Achaemenid and Hellenistic trade in the Indian ocean," in J. Reade (ed.), *The Indian Ocean in Antiquity*, London and New York: Kegan Paul, pp. 251–268.
- 1996b, "Hellenistic seafaring in the Indian Ocean: a perspective from Arabia," in H. P. Ray and J.-F. Salles (eds.), *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, Delhi: Manohar, pp. 293–310.
- SALMON, C., 2004, "Les Persans à l'extrémité orientale de la route maritime (IIe AE–XVIIIe siècle)," *Archipel*, 68, pp. 23–58.
- SANCHEZ, S. F., 2013, "Le long XIXe siècle de Nosy Be et de la baie d'Ampasindava (Nord-Ouest de Madagascar). Dynamiques malgaches et mondialisations dans un comptoir du Sud-Ouest de l'océan Indien," Thèse de doctorat, Paris-VII.
- SANDERSON, S. K., 1995, *Civilizations and World Systems: Studying World-Historical Change*, Walnut Creek, CA, London, and New Delhi, Altamira Press.
- SANDHU, K. S. and WHEATLEY, P. (eds.), 1983, *Melaka: The Transformation of a Malay Capital c. 1400–1980*, 2 vols., Oxford and Kuala Lumpur: Oxford University Press.
- SASAKI, H., 2002, "Chinese and Thai ceramics in Kottapatnam," in *Ancient and Medieval Commercial Activities in the Indian Ocean. Testimony of Inscriptions and Ceramic Sherds*, Report of the Taisho University Research Project 1997–2000, Tokyo: Taisho University, pp. 134–144.
- SASSOON, H., 1980, "Excavations at the site of early Mombasa," *Azania*, 15, pp. 1–42. doi: 10.1080/00672708009511275
- SASTRI, K. A. NILAKANTA, 1935, *The Cōlas*, vol. 1: *To the Accession of Kulōttunga I*, University of Madras (reissued 1955).
- 1949, *History of Srīvijaya*, University of Madras.
- SAUVAGET, J. (ed.), 1948, *Relation de la Chine et de l'Inde, 'Akbār aṣ-ṣīn wa l-hind*, anon., Paris: Les Belles Lettres.

- (ed.), 1954, *Les Merveilles de l'Inde*, trans. J. Sauvaget, in *Mémorial Jean Sauvaget*, vol. 1, Institut Français de Damas, pp. 189–309.
- SCANLON, G. T., 1970, "Egypt and China: trade and imitation," in D. S. Richards (ed.), *Islam and the Trade of Asia: A Colloquium*, Oxford: Cassirer; Philadelphia: University of Pennsylvania Press, pp. 81–95.
- SCHAFER, E. H., 1997, *The Golden Peaches of Samarkand: A Study of Tang Exotics*, Berkeley, Los Angeles, and London: University of California Press (1st edn. 1963, repr. 1985).
- SCHEIDEL, W., 2009, "From the 'Great Convergence' to the 'First Great Divergence': Roman and Qin-Han State Formation and its Aftermath," in W. Scheidel (ed.), *Rome and China: Comparative Perspectives on Ancient World Empires*, Oxford University Press, pp. 11–23.
- SCHENK, H. 2007, "Parthian glazed pottery from Sri Lanka and the Indian Ocean trade," *Zeitschrift für Archäologie Aussereuropäischer Kulturen*, 2, Wiesbaden: Reichert Verlag, pp. 57–90.
- SCHMITT, J.-C., 2009, "Individuation et saisie du monde," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 769–790.
- SCHNEIDER, J., 1977, "Was there a pre-capitalist world-system?," *Peasant Studies*, 6 (1), pp. 20–29 (repr. 1991 in C. Chase-Dunn and T. D. Hall [eds.], *Core/Periphery Relations in Precapitalists Worlds*, pp. 45–66).
- SCHOFF, W. H., 1974, *The Periplus of the Erythraean Sea*, New Delhi: Oriental Books (1st edn. 1912).
- SCHOTTENHAMMER, A., 1999, "The maritime trade of Quanzhou (Zaitun) from the ninth through the thirteenth century," in H. P. Ray (ed.), *Archaeology of Seafaring: The Indian Ocean in the Ancient Period*, Delhi: Pragati, pp. 271–290.
- SCHREURS, G., EVERS, S. T. J., RADIMILAHY, C., and RAKOTOARISOA, J.-A., 2011, "The Rasikajy civilization in northeast Madagascar: a pre-European Chinese community," *Études Océan Indien*, 46–47, pp. 107–132.
- SCHULTZ, W. C., 1998, "The monetary history of Egypt, 642–1517," in C. F. Petry (ed.), *The Cambridge History of Egypt*, Cambridge University Press, pp. 318–338.
- SCHUMPETER, J. A., 1935, *Théorie de l'évolution économique*, Paris: Payot.
- 1939, *Business Cycles: A Theoretical, Historical and Statistical Analysis of the Capitalist Process*, New York and London: McGraw-Hill.
- SCHWARTZ, H. M., 1994, *States versus Markets*, New York: St. Martin's Press.
- SCHWEINFURTH, G., 1912, *Arabische Pflanzennamen aus Aegypten, Algerien und Jemen*, Berlin: Dietrich Reimer.
- SCUBLA, L., 2002, "L'anthropologie a-t-elle fait des progrès depuis Hocart? (11)," *Revue du MAUSS*, 19, pp. 201–220.
- SEN, S. N., 1999, *Ancient Indian History and Civilization*, New Delhi: New Age International.
- SERJEANT, R. B., 1963, *The Portuguese off the South Arabian Coast*, Oxford: Clarendon Press.
- 1981, "Ḥaram and ḥawṭah, the sacred enclave in Arabia," *Studies in Arabian History and Civilization*, London: Variorum, pp. 41–58.
- 1988a and b, "Yemeni merchants and trade in Yemen, thirteenth–sixteenth centuries" and "The Ḥaḍramī network," in D. Lombard and J. Aubin (eds.), *Marchands et hommes d'affaires asiatiques dans l'océan Indien et la mer de Chine: 13e–20e siècles*, Paris: EHESS, pp. 61–82 and pp. 147–154.
- 2000, "Yemeni merchants and trade in Yemen, thirteenth–sixteenth centuries," in D. Lombard and J. Aubin (eds.), *Asian Merchants and Businessmen in the Indian Ocean and the China Sea*, New Delhi: Oxford University Press, pp. 53–78.
- SERVET, J. M., THÉRET, M., and YILDIRIM, Z., 2008, "Universalité du fait monétaire et pluralité des monnaies. De la confrontation coloniale à la rencontre des sciences sociales," and "Anthropologues et économistes face à la globalisation," Colloque du CLERSE et de

- l'Unité de recherche "Travail et mondialisation" (IRD), March 2006, pp. 3-19. horizon.documentation.ird.fr
- SESIANO, J., 1996, *Un traité médiéval sur les carrés magiques: de l'arrangement harmonieux des nombres*, Lausanne: Presses polytechniques et universitaires romandes.
- SHABAN, M. A., 1978, *Islamic History: A New Interpretation*, vol. II, AD 750-1055, Cambridge University Press.
- SHAGDAR, B., 2000, "The Mongol empire in the thirteenth and fourteenth centuries: East-West relations," in V. Elisseeff (ed.), *The Silk Roads, Highways of Culture and Commerce*, UNESCO Publication, New York and Oxford, Berghahn Books, pp. 127-144.
- SHAHRI (AL-), 'A. A. 'A. M., 1994, *Kayfa ibtadaynā wa kayfa irtaqaynā bil- ḥadāra l-insāniyya min shibh al-jazīra l-'arabiyya 'zufār: Kitābātuhā wa nuqūshuhā l-qadīma*, Dubai: Al-Ghurayr.
- SHANMUGAM, P., 2002, "Chronological list of the merchant-guild inscriptions," in N. Karashima (ed.), *Ancient and Medieval Commercial Activities*, Tokyo: Taisho University, pp. 287-296.
- SHARMA, R. S., 1958, *Sudras in Ancient India*, Delhi: Molital Banarsidass.
- 2001, "Usury in early medieval times," in R. Chakravarti (ed.), *Trade in Early India*, Oxford University Press, pp. 370-395 (first published 1983, in *Perspectives in the Social and Economic History of Early India*, Delhi: Munshiram Manoharlal, pp. 193-227).
- 2005, *Indian Feudalism, AD 300-1200*, 3rd rev. edn., Delhi: Macmillan India (1st edn. 1965).
- SHATZMILLER, B., 2000, "L'organisation du travail urbain et les métiers," in J. C. Garcin et al. (eds.), *États, sociétés et cultures du monde musulman médiéval*, vol. II, Paris: PUF, pp. 199-218.
- SHAW, T., 1990, "La zone guinéenne: situation générale," in M. El Fasi and I. Hrbek (eds.), *Histoire générale de l'Afrique*, vol. III: *L'Afrique du VIIe au XIe siècle*, Paris: UNESCO/Nouvelles Éditions Africaines, pp. 489-520.
- SHAW, T., SINCLAIR, P., ANDAH, B., and OKPOKO, A. (eds.), 1993, *The Archaeology of Africa: Food, Metals and Towns*, London: Routledge.
- SHEPHERD, G., 1982, "The making of the Swahili: a view from the southern end of the east African coast," *Paideuma*, 28, pp. 129-147.
- SHERIFF, A., 1976, "Trade and underdevelopment: the role of international trade in the economic history of the East African coast before the 16th century," in B. A. Ogot (ed.), *Hadith 5. Economic and Social History of East Africa*, Nairobi, pp. 1-23.
- 1987, *Slaves, Spices, and Ivory in Zanzibar: Integration of an East African Commercial Empire into the World Economy, 1770-1873*, Woodbridge: James Currey.
- 2002, "Navigational methods in the Indian Ocean," in D. Parkin and R. Barnes (eds.), *Ships and the Development of Maritime Technology in the Indian Ocean*, London and New York: Routledge/Curzon, pp. 209-226.
- 2005, "Slave trade and slave routes of the East African coast," in B.imba, E. Alpers, and A. Isaacman (eds.), *Slave Routes and Oral Tradition in Southeastern Africa*, Maputo: Filsom Entertainment, pp. 13-38.
- 2010, *Dhow Cultures of the Indian Ocean*, London: Hurst and Co., Zanzibar Indian Ocean Research Institute.
- SHERRATT, A., 1993, "Who are you calling peripheral? Dependence and independence in European prehistory," in C. Scarre and F. Healy (eds.), *Trade and Exchange in Prehistoric Europe*, Oxford: Oxbow Books, pp. 245-255.
- 1994a, "What would a Bronze Age world system look like? Relations between temperate Europe and the Mediterranean in later prehistory," *Journal of European Archaeology*, 1 (2), pp. 1-57.
- 1994b, "Core, periphery and margin: perspectives on the Bronze Age," in C. Mathers and S. Stoddart (eds.), *Development and Decline in the Mediterranean Bronze Age*, Sheffield: J. R. Collins, pp. 325-345.

- 2000, "Envisioning global change: a long-term perspective," in R. A. Denemark, J. Friedman, B. K. Gills, and G. Modelski (eds.), *World System History: The Social Science of Long-Term Change*, London and New York: Routledge, pp. 115–132.
- 2004, "Material resources, capital, and power: the coevolution of society and culture," in G. M. Feinman and L. M. Nicolas (eds.), *Archaeological Perspectives on Political Economies*, Salt Lake City: University of Utah Press, pp. 79–103.
- SHERATT, A. and SHERATT, S., 1991, "From luxuries to commodities: the nature of mediterranean Bronze Age trading systems," in N. H. Gale (ed.), *Bronze Age Trade in the Mediterranean*, Jonsered: Paul Aströms Förlag, pp. 351–386.
- 2001, "Technological change in the East Mediterranean Bronze Age: capital, resources and marketing," in A. J. Shortland (ed.), *The Social Context of Technological Change in Egypt and the Near East, 1650–1550 BC*, Oxford: Oxbow Books, pp. 15–38.
- SHERATT, S., 2003, "The Mediterranean economy: 'globalization' at the end of the second millennium bce," in W. G. Dever and S. Gitin (eds.), *Symbiosis, symbolism and the power of the past*, Winona Lake: Eisenbrauns, pp. 37–62.
- SHIBA, Y., 1983, "Sung foreign trade: its scope and organization," in M. Rossabi (ed.), *China Among Equals: The Middle Kingdom and Its Neighbours, 10–14th Centuries*, Berkeley: University of California Press, pp. 89–115.
- SIDDIQUI, I. H., 2012, "Money and social change in India during medieval times," in S. Z. H. Jafri (ed.), *Recording the Progress of Indian History: Symposia Papers of the Indian History Congress, 1992–2010*, Delhi: Primus Books, pp. 443–456.
- SILBERMAN, L., forthcoming, "The history of Anjouan or Johanna (Comores) in the oral tradition," *Études Comoriennes*.
- SILVER, M., 1995, *Economic Structures of Antiquity*, Westport, CT: Greenwood Press.
- 2004, "Modern ancients," in R. Rollinger and C. Ulf (eds.), *Commerce and Monetary Systems in the Ancient World: Means of Transmission and Cultural Interaction*, Stuttgart: Franz Steiner, pp. 65–87.
- SIMON, P., 2006, *La langue des ancêtres: Ny Fitenin-dRazana*, Paris: L'Harmattan (1st edn. 1988, *Ny fiteny fahizany: reconstitution et périodisation du malgache ancien jusqu'au XIVe siècle*, Travaux et Documents 5 du CEROI, Paris: Institut National des Langues et Civilisations orientales).
- SIMONNOT, P., 2002, *Vingt et un siècles d'économie: en vingt et une dates-clés*, Paris: Les Belles Lettres.
- SINCLAIR, P., 1982, "An early trading site in southern Mozambique," *Paideuma*, 28, pp. 149–164.
- 1987, *Space, Time and Social Formation: A Territorial Approach to the Archaeology and Anthropology of Zimbabwe and Mozambique c. 0–1700 AD*, Uppsala: Societas Archaeologica Upsaliensis.
- 1991, "Archaeology in eastern Africa: an overview of current chronological issues," *Journal of African History*, 32, pp. 179–219.
- 2008, "What is the archaeological evidence for external trading contacts on the East African coast in the first millennium BC?," paper presented at the Sealinks Project Workshop at York, December 5, 2008.
- SINCLAIR, P., EKBLOM, A., and WOOD, M., 2012, "Trade and society on the South-East African coast in the later first millennium AD: the case of Chibuene," *Antiquity*, 86, pp. 723–737.
- SINGER, R., BUDTZ-OLSEN, O. E., BRAIN, P., and SAUGRAIN, J., 1957, "Physical features, sickling and serology of the Malagasy of Madagascar," *American Journal of Physical Anthropology*, 15 (1), pp. 91–124.
- SINGH, U., 2008, *A History of Ancient and Early Medieval India: From the Stone Age to the Twelfth Century*, Delhi: Dorling Kindersley, Pearson Education.

- SINOPOLI, C., 2003, *The Political Economy of Craft Production: Crafting Empire in South India c. 1350–1650*, Cambridge University Press.
- AL-SĪRĀFĪ (Abū 'Imrān Mūsā ibn Rabāh al-Awsī), 2006, *Al-sabīh min akhbār al-baḥr wa-'ajā'ibihā*, ed. Y. Al-Hādī, Damascus.
- SIRCAR, D. C., 1983, *Select Inscriptions Bearing on Indian History and Civilization*, vol. II, New Delhi: Munshiram Manoharlal.
- SIRHINDI, YAHYA BIN AHMAD, 1977, *Tarikh-i-Mubarak Shahi*, trans. K. K. Basu, Karachi: Karimsons.
- SKEAT, W. W., 1900, *Malay Magic, Being an Introduction to the Folklore and Popular Religion of the Malay Peninsula*, London: Macmillan.
- SMIDT, W., 2001, "A Chinese in the Nubian and Abyssinian kingdoms (8th century: the visit of Da Huan to Molin-guo and Laobosa," *Chroniques yéménites*, 9, pp. 17–28.
- SMITH, A., 1961, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 2 vols., London: Methuen.
- 1991, *La richesse des nations*, 2 vols., Paris: Flammarion.
- SMITH, A. B., 2000, "Origins of the domesticated animals of southern Africa," R. Blench and K. C. MacDonald (eds.), *Origins and Development of African Livestock : Archaeology, Genetics, Linguistics and Ethnography*, London: UCL Press, pp. 222–238.
- SMITH, G. R., 1995, "Have you anything to declare? Maritime trade and commerce in Ayyubid Aden: practices and taxes," *Proceedings of the Seminar for Arabian Studies*, 25, pp. 127–139.
- 2006, *A Medieval Administrative and Fiscal Treatise from the Yemen: The Rasulid Mulakkhaṣ al-fīṭan of al-Ḥasan b. 'Alī al-Ḥusaynī*, Oxford University Press (*Journal of Semitic Studies* Supplement 20).
- 2008, *A Traveller in Thirteenth-Century Arabia: Ibn al-Mujāwir's Tārīkh al-Mustabṣir*, London: Hakluyt Society.
- SOEBADIO, H., 2001, "The archaeological site of Ratu Boko: a case of problems of restoration and interpretation," in M. J. Klokke and K. R. Van Kooij (eds.), *Fruits of Inspiration: Studies in Honour of Prof. J. G. De Casparis, Retired Professor of the Early History and Archeology of South and Southeast Asia at the University of Leiden, the Netherlands, on the Occasion of His 85th Birthday*, Groningen: Egbert Forstein, pp. 455–474.
- SOEKMONO, 1979, "The archaeology of central Java before 800 AD," in R. B. Smith and W. Watson (eds.), *Early South East Asia: Essays in Archaeology, History and Historical Geography*, New York: Oxford University Press, pp. 457–472.
- SOMBART, W., 1902–1928, *Der moderne Kapitalismus*, Munich and Leipzig: Duncker & Humblot.
- 1926, *Le bourgeois: contribution à l'histoire morale et intellectuelle de l'homme économique moderne*, Paris: Payot (1st edn. 1913).
- SOODYALL, H., JENKINS, T., HEWITT, R., KRAUSE, A., and STONEKING, M., 1996, "The peopling of Madagascar," in A. J. Boyce and C. G. N. Mascie-Taylor (eds.), *Molecular Biology and Human Diversity*, Cambridge University Press, pp. 157–170.
- SOODYALL, H., MORAR, B., and JENKINS, T., 2013, "The genetic trail to Madagascar," in S. Evers, G. Campbell, and M. Lambek (eds.), *Contest for Land in Madagascar*, Leiden: Brill, pp. 21–40.
- SORREL, P., POPESCU, S.-P., KLOTZ, S., SUC, J.-P. and OBERHÄNSLI, O., 2007, "Climate variability in the Aral Sea basin (Central Asia) during the late Holocene based on vegetation changes," *Quaternary Research*, 67 (3), pp. 357–370.
- SOUTHWORTH, W. A., 2004a, "The coastal states of Champa," in I. Glover and P. Bellwood (eds.), *Southeast Asia, From Prehistory to History*, Abingdon and New York: Routledge/Curzon, pp. 209–233.

- 2004b and c, "Funan" and "Sailendras: A Javanese Buddhist dynasty," in Ooi Keat Gin (ed.), *Southeast Asia: A Historical Encyclopedia: From Angkor Wat to East Timor*, Santa Barbara, CA: ABC-Clio, vol. I, pp. 529–530, and vol. III, pp. 1167–1168.
- SOUTHWORTH, W. A. and PRIOR, R., 2010, "History and archaeology at Tra Kieu," in B. Bellina, E. A. Bacus, T. O. Pryce, and J. Wisseman Christie (eds.), *50 Years of Archaeology in Southeast Asia, Essays in Honour of Ian Glover*, Bangkok: River Books, pp. 182–193.
- SPAULDING, J., 2000, "Precolonial Islam in the eastern Sudan," in N. Levtzion and R. L. Pouwels (eds.), *The History of Islam in Africa*, Athens, OH: Ohio University Press; Oxford: James Currey; Claremont: David Philip, pp. 117–129.
- SPEAR, T., 2000, "Early Swahili history reconsidered," *International Journal of African Historical Studies*, 33 (2), pp. 257–290.
- SPENCER, G. W., 1977, "The politics of plunder: the Colas in eleventh century Ceylon," *Journal of Asian Studies*, 26, pp. 405–420.
- 2001, "In search of change: reflections on the scholarship of Noboru Karashima," in K. R. Hall (ed.), *Structure and Society in Early South Asia. Essays in Honour of Noboru Karashima*, London: Routledge, pp. 85–116.
- STARK, M. T., 2004, "Pre-Angkorian and Angkorian Cambodia," in I. Glover and P. Bellwood (eds.), *Southeast Asia: From Prehistory to History*, Abingdon and New York: Routledge/Curzon, pp. 89–119.
- STAUBWASSER, M. and WEISS, H., 2006, "Holocene climate and cultural evolution in late prehistoric–early historic West Asia," *Quaternary Research*, 66, pp. 372–387.
- STEIN, B., 1980, *Peasant State and Society in Medieval South India*, Delhi: Oxford University Press.
- 1982, "Vijayanagara c. 1350–1564," in T. Raychaudhuri and I. Habib (eds.), *The Cambridge Economic History of India*, vol. 1: c. 1200–c. 1750, Cambridge University Press, pp. 102–124.
- 1995, "The segmentary state: interim reflections," in H. Kulke (ed.), *The State in India, 1000–1700*, Oxford University Press, pp. 134–161.
- 2002, *A History of India*, New Delhi: Oxford University Press (first publ. 1998).
- STEIN, G. J., 1999, *Rethinking World Systems. Diasporas, Colonies, and Interaction in Uruk Mesopotamia*, Tucson: University of Arizona Press.
- STENSETH, N. C., SAMIA, N. I., VILJUGREIN, H., KAUSRUD, K. L., BEGON, M., DAVIS, S., LEIRS, H., DUBYANSKIY, V. M., ESPER, J., AGEYEV, V. S., KLASSOVSKIY, N. L., POLE, S. B., and CHAN, K.-S., 2006, "Plague dynamics are driven by climate variation," *Proceedings of the National Academy of Sciences of the United States (PNAS)*, 103 (35), pp. 13110–13115.
- STERN, S. M., 1967, "Ramisht of Siraf: a merchant millionaire of the twelfth century," *Journal of the Royal Asiatic Society of Great Britain and Ireland*, pp. 10–14.
- STEVENS, C. J., NIXON, S., MURRAY, M. A., and FULLER, D. Q., 2014, *Archaeology of African Plant Use*, Walnut Creek, CA: Left Coast Press.
- STILES, D., 1992, "The ports of East Africa, the Comoros and Madagascar: their place in Indian Ocean trade from 1–1500 AD," *Kenya Past and Present*, 24, pp. 27–36.
- STÖHR, W., 1968, "Les religions archaïques d'Indonésie et des Philippines," in W. Stöhr and P. Zoetmulder (eds.), *Les religions d'Indonésie*, Paris: Payot, pp. 9–255.
- SUAREZ, T., 1999, *Early Mapping of Southeast Asia*, Singapore: Periplus Editions.
- SUBBARAYALU, Y., 1996, "Chinese ceramics of Tamilnadu and Kerala coasts," in H. P. Ray and J.-F. Salles (eds.), *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, Delhi: Manohar, pp. 109–114.
- SUBBARAYALU, Y. and KARASHIMA, N., 2002, "A trade guild inscription from Viharehinna in Sri Lanka," in *Ancient and Medieval Commercial Activities in the Indian Ocean. Testimony of Inscriptions and Ceramic Sherds*, Tokyo: Taisho University, pp. 27–35.
- SUBRAHMANYAM, S., 1990a, "Introduction," in S. Subrahmanyam (ed.), *Merchants, Markets, and the State in Early Modern India*, Delhi: Oxford University Press, pp. 1–17.

- 1990b, *The Political Economy of Commerce: Southern India 1500–1650*, Cambridge University Press.
- 1993, *The Portuguese Empire in Asia, 1500–1700*, London and New York: Longman.
- 1994a and b, “Introduction” and “Precious metal flows and prices in western and southern India, 1500–1750: some comparative and conjunctural aspects,” in S. Subrahmanyam (ed.), *Money and the Market in India 1100–1700*, Delhi: Oxford University Press, pp. 1–56 and 186–218 (first publ. 1991).
- 1995, “Of *Imârat* and *Tijârat*: Asian merchants and state power in the western Indian Ocean, 1400 to 1750,” *Comparative Studies in Society and History*, 37, pp. 750–780.
- 1996a, “Institutions, agency and economic change in South Asia,” in B. Stein and S. Subrahmanyam (eds.), *Institutions and Economic Change in South Asia*, Delhi: Oxford University Press, pp. 14–47.
- 1996b, “Iranians abroad: intra-Asian elite migration and early modern state formation,” in S. Subrahmanyam (ed.), *Merchant Networks in the Early Modern World*, Aldershot and Brookfield, VT: Variorum, pp. 72–95 (first publ. 1992, *Journal of Asian Studies*).
- 1999, *L’empire portugais d’Asie, 1500–1700*, Paris: Maisonneuve et Larose.
- 2001a, “Hearing voices: vignettes of early modernity in South Asia,” in S. Eisenstadt (ed.), *Public Spheres and Collective Identities*, London: Transaction Publishers, pp. 75–104.
- 2001b, “Du Tage au Gange, au XVII^e siècle: une conjoncture millénariste à l’échelle eurasiatique,” *Annales HSS*, 1, pp. 51–84.
- 2005a, *Explorations in Connected History: Mughals and Franks*, New Delhi: Oxford University Press.
- 2005b, *Explorations in Connected History: From the Tagus to the Ganges*, New Delhi: Oxford University Press.
- 2014, *Aux origines de l’histoire globale*, Paris: Fayard, Collège de France, coll. “Leçons inaugurales.”
- SUBRAHMANYAM, S. and BAYLY, C. A., 1988, “Portfolio capitalists and the political economy of early modern India,” *Indian Economic and Social History Review*, 25 (4), pp. 421–424 (repr. in Subrahmanyam 1990, pp. 242–265).
- SUBRAHMANYAM, S. and MARKOVITS, C., 2009a and b, “Inde et Asie du Sud-Est: lendemains d’empires” and “1414: conversion à l’islam de Parameswara,” in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 233–249 and 312–315.
- SUGIHARA, K., 2003, “The East Asian path of economic development: a long-term perspective,” in G. Arrighi, T. Hamashita, and M. Selden (eds.), *The Resurgence of East Asia: 500, 150 and 50 Year Perspectives*, London and New York: Routledge, pp. 78–123.
- 2004, “The state and the Industrious Revolution in Tokugawa Japan,” London School of Economics, Working Paper no. 02/04.
- 2005, *Japan, China, and the Growth of the Asian International Economy, 1850–1949*, vol. 1, New York: Oxford University Press.
- SUMMERS, R., 1969, *Ancient Mining in Rhodesia*, Memoirs of the National Museums and Monuments of Rhodesia, 3, Harare: Trustees of the National Museums of Rhodesia.
- SUTTON, J. E. G., 1991, “The international factor at Igbo-Ukwu,” *The African Archaeological Review*, 9, pp. 145–160.
- 1998, “Kilwa,” *Azania*, 33, pp. 113–169.
- 2001, “Kilwa in the early fourteenth century: gold trade, monumental architecture and Sunnī conformity at the southern extremity of dār al-Islām: some archaeological and historical evidence,” in B. S. Amoretti (ed.), *Islam in East Africa: New Sources*, Rome: Herder, pp. 425–448.
- SWAN, L. M., 1994, *Early Gold Mining on the Zimbabwean Plateau* (Studies in African Archaeology 9), Uppsala: Societas Archaeologica Upsaliensis.

- 2007a, "Economic and ideological roles of copper ingots in prehistoric Zimbabwe," *Antiquity*, 81 (314), pp. 999–1012.
- 2007b, "Early iron manufacturing industries in semi-arid, south-eastern Zimbabwe," *Journal of African Archaeology*, 5 (2), pp. 315–338.
- SWELLENGREBEL, J. L. *et al.*, 1960, *Bali: Life, Thought, and Ritual*, The Hague: W. van Hoeve.
- SYKES, P. M., 2006, *History of Persia*, London: Routledge (1st edn. 1915).
- TABARI, 1991, *The History of al Tabari*, vol. XXXVI: *The Revolt of the Zanj AD 869–879/A.H. 255–265*, trans. D. Waines, State University of New York Press.
- TAGUIEFF, P.-A., 2004, *Le sens du progrès: une approche historique et philosophique*, Paris: Flammarion.
- TAINTER, J. A., 1988, *The Collapse of Complex Societies*, Cambridge University Press.
- TAMPOE, M., 1989, *Maritime Trade between China and the West. An Archaeological Study of the Ceramics from Siraf (Persian Gulf), 8th to 15th Centuries AD* (BAR International Series 555), Oxford: Archaeopress.
- TAN, M., LIU, T. S., HOU, J. Z., QIN, X. G., ZHANG, H. C., and LI, T. Y., 2003, "Cyclic rapid warming on centennial-scale revealed by a 2650-year stalagmite record of warm season temperature," *Geophysical Research Letters*, 30, art. no. 1617.
- TAN YEOK SEONG, 1964, "The Sri Vijayan inscription of Canton (AD 1079)," *Journal of Southeast Asian History*, 5 (2), pp. 17–24.
- TARLING, N. (ed.), 1992, *The Cambridge History of Southeast Asia*, vol. 1, part. 1, *From Early Times to c. 1500*, Cambridge University Press.
- TAWNEY, R. H., 1938, *Religion and the Rise of Capitalism*, West Drayton: Pelican Books (1st edn. 1926).
- TEMPLE, R., 2002, *The Genius of China, 3000 Years of Science, Discovery and Invention*, rev. edn., Foreword by J. Needham, London: Prion Books (1st edn. 1986).
- TERRAY, E., 1979, "On exploitation: elements of an autocritique," *Critique of Anthropology*, 4, 13–14, pp. 29–39.
- 1986, "L'État, le hasard et la nécessité. Réflexions sur une histoire," *L'Homme*, 26 (1–2), pp. 213–224.
- 1995, *Une histoire du royaume abron du Gyaman, des origines à la conquête coloniale*, Paris: Karthala.
- TEYSSIER, P., (ed.), 2004, *Voyage de Ludovico di Varthema en Arabie et aux Indes orientales (1503–1508)*, Paris: Chandeigne.
- THACKSTON, W. M., 1989, "Kamaluddin Abdul-Razzaq Samarqandi: mission to Calicut and Vijayanagar," in *A Century of Princes: Sources on Timurid History and Art*, Cambridge, MA: Harvard University Aga Khan Program, pp. 299–321.
- 2001, *Album Prefaces and Other Documents on the History of Calligraphers and Painters*, Leiden: Brill.
- THAKUR, S. P., 1996, "Note on international trade and the political economy of state formation in South Asia: a long wave ?," *Review*, 19 (4), pp. 401–411.
- THAPAR, R., 1997, "Early Mediterranean contacts with India: an overview," in F. De Romanis and A. Tchernia (eds.), *Crossings: Early Mediterranean Contacts with India*, New Delhi: Manohar, pp. 11–40.
- 2004, *Early India: From the Origins to AD 1300*, Berkeley: University of California Press.
- THEOPHRASTUS, *Recherches sur les plantes*, trans. Suzanne Amigues, 1988, vol. I: books I–II, LVIII; 1989, vol. II: books III–IV.10; 1993, vol. III: book VI. 12; 2003, vol. IV: books VII–VIII. 12; 2006, vol. V: book IX. Index.
- THIERRY, F., 2001, "Sur les spécificités fondamentales de la monnaie chinoise," in A. Testard (ed.), *Aux origines de la monnaie*, Paris: Éditions Errance, pp. 109–144.

- THOMAS, R. P., 1908, "L'origine des noms de mois à Madagascar: notes de philologie comparée," *Bulletin de l'Académie Malgache*, pp. 17–36.
- THOMAZ, L. F., 1988, "Malaka et ses communautés marchandes au tournant du 16^e siècle," in D. Lombard and J. Aubin (eds.), *Marchands et hommes d'affaires asiatiques dans l'océan Indien et la mer de Chine: 13^e–20^e siècles*, Paris: EHESS, pp. 31–48.
- 1993, "The Malay sultanate of Melaka," in A. Reid (ed.), *Southeast Asia in the Early Modern Era*, Ithaca, NY, and London: Cornell University Press, pp. 69–90.
- 2009, "La découverte de Madagascar par les Portugais au XVII^e siècle," *Archipel*, 78, pp. 153–180.
- THONDHLANA, T. P. and MARTINÓN-TORRES, M., 2009, "Small size, high value: composition and manufacture of second millennium and copper-based beads from northern Zimbabwe," *Journal of African Archaeology*, 7 (1), pp. 79–97.
- THORBAHN, P. F., 1979, "The precolonial ivory trade of East Africa: reconstruction of a human–elephant ecosystem," Ph.D. dissertation, University of Massachusetts.
- THURGOOD, G., 1999. *From Ancient Cham to Modern Dialects: Two Thousand Years of language contact and change*, Oceanic Linguistics Special Publication no. 28, Honolulu: University of Hawai'i Press.
- TIBBETTS, G. R., 1971, *Arab Navigation in the Indian Ocean before the Coming of the Portuguese, being a translation of Kitāb al Fawā'id fi usūl al-baḥr wa'l-qarwā'id of Aḥmad b. Mājid al-Najdī*, London: Luzac (repr. London: Royal Asiatic Society, 1981).
- 1979, *A Study of the Arabic Texts Containing Material on South-East Asia*, Leiden: Brill.
- TOBING, P., 1956, *The Structure of the Toba-Batak Belief in the High God*, Amsterdam: Jacob van Campen.
- TOFANELLI, S., BERTONCINI, S., CASTRI, L., LUISELLI, D., CALAFELL, F., DONATI, G., and PAOLI, G., 2009, "On the origins and admixture of Malagasy: new evidence from high-resolution analyses of paternal and maternal lineages," *Molecular Biology and Evolution*, 26 (9), pp. 2109–2124.
- TOMASCHEK, W. and BITTNER, W., 1897, *Die topografischen Capitel des indischen Seespiegels Mobit*, Vienna: K. K. Geographischen Gesellschaft.
- TOUSSAINT, A., 1961, *Histoire de l'océan Indien*, Paris: PUF.
- TRACY, J. D. (ed.), 1991, *The Political Economy of Merchant Empires, State Power and World Trade, 1350–1750*, Cambridge University Press.
- TREADGOLD, W., 2001, *A Concise History of Byzantium*, Basingstoke: Palgrave Macmillan.
- TREYDTE, K. S., SCHLESER, G. H., HELLE, G., FRANK, D. C., WINIGER, M., HAUG, G. H., and ESPER, J., 2006, "The twentieth century was the wettest period in northern Pakistan over the past millennium," *Nature*, 440 (7088), pp. 1179–1182.
- TRIMINGHAM, J. S., 1964, *Islam in East Africa*, Oxford: Clarendon Press.
- 1975, "The Arab geographers and the East African coast," in N. Chittick and R. Rotberg (eds.), *East Africa and the Orient*, London and New York: Holmes and Meier, Africana, pp. 115–146.
- TRYON, D., 1994, "Oceanic plant names," in A. K. Pawley and M. D. Ross (eds.), *Austronesian Terminologies: Continuity and Change*, Canberra: Pacific Linguistics Series C-127, pp. 481–509.
- TURCHIN, P., 2009, "A theory for formation of large empires," *Journal of Global History*, 4 (2), pp. 191–217.
- TURCHIN, P. and HALL, T. D., 2003, "Spatial synchrony among and within world-systems: insights from theoretical ecology," *Journal of World-Systems Research*, 9 (1), pp. 37–64.
- TURCHIN, P. and NEFEDOV, S. A., 2009, *Secular Cycles*, Princeton University Press.
- TURNER, H. R., 1997, *Science in Medieval Islam: An Illustrated Introduction*, Austin: University of Texas Press.
- TURNER, V. W., 1967, *The Forest of Symbols: Aspects of Ndembu Ritual*, Ithaca, NY: Cornell University Press.

- UDOVITCH, A., 1970a, *Partnership and Profit in Medieval Islam*, Princeton University Press.
- 1970b, "Commercial techniques in early medieval Islamic trade," in D. Richards (ed.), *Islam and the Trade of Asia*, Oxford: Cassirer; Philadelphia: University of Pennsylvania Press, pp. 37–62.
- 1975, "Reflections on the institutions of credits and banking in the medieval Islamic Near East," *Studia Islamica*, 41, pp. 5–21.
- USOSKIN, I. G., 2013, "A history of solar activity over millennia," *Living Reviews in Solar Physics*, 10 (1), www.livingreviews.org/lrsp-2013-1, doi:10.12942/lrsp-2013-1
- USOSKIN, I. G., SOLANKI, S. K., and KOVALTSOV, G. A., 2007, "Grand minima and maxima of solar activity: new observational constraints," *Astronomy & Astrophysics*, 471, pp. 301–309.
- 2012, "Grand minima of solar activity during the last millennia," in D. Webb and C. Mandrini (eds.), *Comparative Magnetic Minima: Characterizing Quiet Times in the Sun and Stars*, Proceedings of IAU Symposium no. 286, Cambridge University Press, pp. 372–382.
- VALÉRIAN, D., 2009, "La Méditerranée: rivalités nouvelles dans les marchés de l'Ancien Monde," in P. Boucheron (ed.), *Histoire du monde au XVe siècle*, Paris: Fayard, pp. 75–91.
- VALLET, E., 1999, *Marchands vénitiens en Syrie à la fin du XVe siècle*, Paris: ADHE.
- 2006, "Pouvoir, commerce et marchands dans le Yémen rasûlide (626–858/1229–1454)," thèse de doctorat, Université Paris 1 Panthéon-Sorbonne, 2 vols.
- 2007, "Entre deux 'mondes'. Les produits du commerce égyptien à Aden (XIIIe–XIVe siècles)," in D. Coulon, C. Picard, and D. Valérian (eds.), *Espaces et réseaux en Méditerranée, VIe–XVIIe siècle*, vol. 1: *La configuration des réseaux*, Paris: Éditions Bouchène, pp. 205–236.
- 2010a, "Fermé sur lui-même, l'Islam?," *L'Histoire*, "Les Grandes Découvertes," 355, pp. 24–29.
- 2010b, *L'Arabie marchande, état et commerce sous les sultans rasûlides du Yémen (626–858/1229–1454)*, Paris: Publications de la Sorbonne.
- 2011, "Le marché des épices d'Alexandrie et les mutations du grand commerce de la mer Rouge (XIVe–XVe siècle)," in C. Décobert, J.-Y. Empereur, and C. Picard (eds.), *Alexandrie médiévale 4*, Alexandria: Centre d'Études Alexandrines, pp. 213–228.
- 2015, "Sharma et l'essor du commerce islamique dans l'océan Indien occidental (Xe–XIIe siècle)," in A. Rougeulle (éd.), *Sharma: un entrepôt de commerce médiéval sur la côte du Hadramawt (Yémen, ca 980–1180)*, Oxford: Archaeopress, pp. 467–478.
- VAN BAVEL, B., CAMPOPIANO, M., and DIJKMAN, J., 2014, "Factor markets in early Islamic Iraq, c. 600–1100 AD," *Journal of Economic and Social History of the Orient*, 57, pp. 262–89.
- VAN DE MIEROOP, M., 2002, "A history of Near Eastern debt?," in M. Hudson and M. van de Mieroop (eds.), *Debt and Economic Renewal in the Ancient Near East*, Bethesda, MD: CDL Press, pp. 59–94.
- VAN DER SLEEN, W., 1960, "Les collections malgaches du Musée de Nîmes (France)," *Naturaliste malgache*, 12, pp. 183–191.
- VAN DER WEIJDEN, G., 1981, *Indonesische Reisrituale*, Basler Beiträge zur Ethnologie 20, Basel: Ethnologisches Seminar der Universität und Museum für Völkerkunde.
- VAN GENNEP, A., 1904. *Tabou et totémisme à Madagascar: étude descriptive et théorique*, Paris: E. Leroux.
- VARENNE, J., 1997, *Le tantrisme. Mythes, rites et métaphysique*, Paris: Albin Michel.
- VARTHEMA, L. DI, 1863, *The Travels of Ludovico di Varthema in Egypt, Syria, Arabia Deserta and Arabia Felix, in Persia, India, and Ethiopia, AD 1503 to 1508*, trans. J. W. Jones, introduction and notes by G. P. Badger, London: Hakluyt Society.
- VAUGHAN, D. A., LU, B.-R., and TOMOOKA, N., 2008, "The evolving story of rice evolution," *Plant Science*, 174, pp. 394–408.
- VEENHOF, K. R., 1999, "Silver and credit in old Assyrian trade," in J. G. Dercksen (ed.), *Trade and Finance in Ancient Mesopotamia: Proceedings of the First Mos Symposium*,

- Leiden* 1997 (Mos Studies 1), Nederlands Historisch-Archaeologisch Instituut te Istanbul, pp. 55–83.
- VÉRIN, P., 1971, “Les anciens habitants de Rezoky et Asambalahy,” *Taloha*, 4, pp. 29–45.
- (ed.) 1972, *Histoire ancienne du nord-ouest de Madagascar* (*Taloha*, 5), Antananarivo: Musée d’Art et d’Archéologie.
- 1975a, *Les échelles anciennes du commerce sur les côtes nord de Madagascar*, Lille: Service de reproduction des thèses, 2 vols. (thèse Lettres, Paris-I, 1972).
- 1975b, “Austronesian contributions to the culture of Madagascar: some archaeological problems,” in N. Chittick and R. Rotberg (eds.), *East Africa and the Orient*, London and New York: Holmes and Meier, Africana Publishing Co., pp. 164–191.
- 1979a, “Le problème des origines malgaches,” *Taloha*, 8, pp. 41–55.
- 1979b, “Aspects de la civilisation des échelles anciennes du Nord de Madagascar,” in *Mouvements de populations dans l’Océan Indien, Actes du 4e Congrès de l’Association Historique Internationale de l’Océan Indien et du 14e Colloque de la Commission Internationale d’Histoire Maritime* (Saint-Denis de la Réunion, septembre 1972), Paris: Champion, pp. 61–90.
- 1980, “Les apports culturels et la contribution africaine au peuplement de Madagascar,” in *Relations historiques à travers l’océan Indien: compte-rendu de la réunion d’experts de 1974*, Paris: UNESCO, Histoire générale de l’Afrique, Études et Documents 3, pp. 103–124.
- 1986, *The History of Civilisation in North Madagascar*, trans. D. Smith, Rotterdam and Boston: A. A. Balkema.
- 1990, *Madagascar*, Paris: Karthala.
- 1992, “États ou cités-états dans le nord de Madagascar,” *Taloha*, 11, pp. 65–70.
- 1994a, *Les Comores*, Paris: Karthala.
- 1994b, “L’Imerina et le peuplement de Madagascar: les hypothèses confrontées aux nouvelles découvertes,” *Taloha*, 12, pp. 25–28.
- VÉRIN, P. and WRIGHT, H. T., 1999, “Madagascar and Indonesia: new evidence from archaeology and linguistics,” *Bulletin of the Indo-Pacific Prehistory Association*, 18, pp. 35–42.
- VERLEY, P., 1997a, *L’échelle du monde: essai sur l’industrialisation de l’Occident*, Paris: Gallimard.
- 1997b, *La révolution industrielle*, Paris: Gallimard.
- 2010, “Marché et mondialisation chez Braudel,” paper presented at seminar “Fernand Braudel, ‘Civilisation matérielle, économie et capitalisme’, trente ans après,” Institute of European and Global Studies, Leipzig, September 2009.
- VERNET, T., 2003, “Le commerce des esclaves sur la côte swahili, 1500–1750,” *Azania*, 38, pp. 69–97.
- 2004, “Le territoire hors les murs des cités-états swahili de l’archipel de Lamu, 1600–1800,” *Journal des Africanistes*, 74 (1–2), pp. 381–411.
- 2005, “Les cités-états swahili de l’archipel de Lamu, 1585–1810: dynamiques endogènes, dynamiques exogènes,” thèse, Paris I.
- 2013, “Avant le giroflier: esclavage et agriculture sur la côte swahili, 1590–1812,” in H. Médard et al. (eds.), *Traites et esclavages en Afrique orientale et dans l’Océan Indien*, Paris: Karthala, pp. 245–306.
- 2015, “East African travelers and traders in the Indian Ocean: Swahili ships, Swahili mobilities ca.1500–1800,” in M. N. Pearson (ed.), *Trade, Circulation and Flow in the Indian Ocean World: Proceedings of the Conference ‘The Dimensions of the Indian Ocean World Past’, Fremantle 2012*, London: Palgrave Macmillan.
- VERNIER, E. and MILLOT, J., 1971, *Archéologie malgache: Comptoirs musulmans*, Paris: Muséum National d’Histoire Naturelle, supplement to *Objets et Mondes, revue du Musée de l’Homme*, 11 (3).

- VICKERY, M., 1991, "The Ram Khamhaeng inscription: a Piltdown skull of Southeast Asian history?," in J. R. Chamberlain (ed.), *The Ram Khamhaeng Controversy: Selected Papers*, Bangkok: The Siam Society, pp. 3–52.
- 2003–2004, "Funan reviewed: deconstructing the Ancients," *Bulletin de l'École française d'Extrême-Orient*, 90–91, pp. 101–143.
- 2004, "Cambodia and its neighbors in the fifteenth century," Working Paper Series no. 27, Singapore: Asia Research Institute.
- 2005, "Champa revised," Working Paper Series no. 37, Singapore: Asia Research Institute.
- VILAR, P., 1974, *Or et monnaie dans l'histoire*, Paris: Flammarion.
- VIRÉ, F., 1984, "L'océan Indien d'après le géographe Abû Abd-Allah Muhammad Ibn Idrîs al-Hammûdî al-Hasanî, dit Al-Sarîf Al-Idrîsî (493–560 H./1100–1166) (Extraits traduits et annotés du Livre de Roger)," *Études sur l'Océan Indien*, Coll. des travaux de l'Université de la Réunion, pp. 13–45.
- VIRÉ, F. and HÉBERT, J.-C., 1987, "Madagascar, Comores et Mascareignes à travers la Hawiya d'Ibn Mâgîd (866 H./1462)," *Omaly sy Anio*, 25–26, pp. 55–80.
- VOGEL, H. U., 1993, "Cowry trade and its role in the economy of Yünnan: from the ninth to the mid-seventeenth century," part 1, *Journal of the Economic and Social History of the Orient*, 36 (3), pp. 211–251.
- VOGEL, P., 1990, "The cultural basis: development and influence of a socially mediated trading corporation in southern Zambezia," *Journal of Anthropological Archaeology*, 9, pp. 104–147.
- VOIGT, E. A., 1983, *Mapungubwe: An Archaeozoological Interpretation of an Iron Age Community*, Pretoria: Transvaal Museum.
- VON GLAHN, R., 1996, *Fountain of Fortune: Money and Monetary Policy in China, 1000–1700*, Berkeley, Los Angeles, and London: University of California Press.
- VRIES, J. DE, 2008, *The Industrious Revolution: Consumer Behavior and the Household Economy, 1650 to the Present*, Cambridge University Press.
- WAARDEN, C. VAN, 1998, "The Later Iron Age," in P. Lane, A. Reid, A. Segobye (eds.), *Ditswa Mmung: The Archaeology of Botswana*, Gaborone: Pula Press and The Botswana Society, pp. 115–160.
- WADE, G., 2000, "The Ming shi-lu as a Source for Thai history – fourteenth to seventeenth centuries," *Journal of Southeast Asian Studies*, 31 (2), pp. 249–294.
- 2005, "The Zheng He voyages: a reassessment," *Journal of Malaysian Branch of the Royal Asiatic Society*, 78 (1), pp. 37–58.
- WADE, G. and LAICHEN, S. (eds.), 2010, *Southeast Asia in the Fifteenth Century: The China Factor*, National University of Singapore Press.
- WAGNER, D. B., 2001, "The administration of the iron industry in eleventh-century China," *Journal of the Economic and Social History of the Orient*, 44 (2), pp. 175–193.
- WALERY, S., 2003, "Les hommes d'affaire de la Renaissance et 'l'esprit du capitalisme': l'exemple de la lettre de change," upmf-grenoble.fr/irepd/regulation/Forum/Forum_2003/Forumpdf/RR_WALERY
- WALLERSTEIN, I., 1974a, "The rise and future demise of the world capitalist system: concepts for comparative analysis," *Comparative Studies in Society and History*, 16 (4), pp. 387–415.
- 1974b, 1980, 1988, *The Modern World-System*, vol. I: *Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*; vol. II: *Mercantilism and the Consolidation of the European World-Economy, 1600–1750*; and vol. III: *The Second Era of Great Expansion of the Capitalist World-Economy 1730–1840s*, San Diego, New York, Boston, London, Sydney, Tokyo, and Toronto: Academic Press.
- 1983, *Historical Capitalism*, London: Verso.
- 1984a, *The Politics of the World-Economy: The States, the Movements and the Civilizations* (Studies in Modern Capitalism), Cambridge University Press.

- 1984b, *Le mercantilisme et la consolidation de l'économie-monde européenne (1600–1750)*, Paris: Flammarion (1st edn. 1980).
- 1991, *The Capitalist World-Economy*, Cambridge University Press; Paris: Editions de la Maison des Sciences de l'Homme (1st edn. 1979).
- 1993, "World system versus world-systems: a critique," in A. G. Frank and B. K. Gills (eds.), *The World System: Five Hundred Years or Five Thousand?*, London and New York: Routledge, pp. 292–296.
- 1999a, "Frank proves the European Miracle," *Review*, 22 (3), pp. 355–371.
- 1999b, "The West, capitalism, and the modern world-system," in T. Brook and G. Blue (eds.), *China and Historical Capitalism: Genealogies of Sinological Knowledge*, New York: Cambridge University Press, pp. 10–56.
- 1999c, "The West, capitalism, and the modern world-system," in T. Brook and G. Blue (eds.), *China and Historical Capitalism: Genealogies of Sinological Knowledge*, New York: Cambridge University Press, pp. 10–56.
- 2001, "Braudel and interscience: a preacher to empty pews?," *Review*, 24 (1), pp. 3–12.
- 2002a and b, "Introduction" and "The world we are entering, 2000–2050 (32 propositions)," in I. Wallerstein and A. Clesse (eds.), *The World We Are Entering, 2000–2050*, Amsterdam: Dutch University Press, pp. 7–8 and 9–22.
- 2004, *World-Systems Analysis: An Introduction*, Durham, NC: Duke University Press.
- 2006, *Comprendre le monde: introduction à l'analyse des systèmes-mondes*, Paris: La Découverte.
- WALSH, M., 2007, "Island subsistence: hunting, trapping and the translocation of wildlife in the western Indian Ocean," *Azania*, 52, pp. 83–113.
- WALSHAW, S. C., 2005, "Swahili urbanization, trade, and food production: botanical perspectives from Pemba Island, Tanzania, AD 700–1500," Ph.D. dissertation, Washington University in St. Louis.
- 2010, "Converting to rice: urbanization, Islamization and crops on Pemba Island, Tanzania, AD 700–1500," *World Archaeology*, 42 (1), pp. 137–154.
- WALZ, J. R., and BRANDT, S. A., 2006, "Toward an archaeology of the other African diaspora: the slave trade and dispersed Africans in the western Indian Ocean," in J. B. Havisser and K. C. MacDonald (eds.), *African Re-Genesis: Confronting Social Issues in the Diaspora*, Walnut Creek, CA: Left Coast Press, pp. 246–268.
- WANG GUNGWU, 1990, "Merchants without empire: the Hokkien sojourning communities," in J. D. Tracy (ed.), *The Rise of Merchant Empires: Long-Distance Trade in the Early Modern World, 1350–1750*, Cambridge University Press, pp. 400–422.
- 1998, *The Nanhai Trade: The Early History of the Chinese Trade in the South China Sea*, Singapore: Times Academic Press (1st edn. 1958).
- WARBURTON, D., 1997, *State and Economy in Ancient Egypt*, University Press Fribourg; Göttingen: Vandenhoeck and Ruprecht.
- 2000a, "Before the IMF: the economic implications of unintentional structural adjustment in Ancient Egypt," *Journal of the Economic and Social History of the Orient*, 43 (2), pp. 65–131.
- 2000b, "State and economy in ancient Egypt," in R. A. Denemark, J. Friedman, B. K. Gills, and G. Modelski (eds.), *World System History: The Social Science of Long-Term Change*, London and New York: Routledge, pp. 169–184.
- 2003, *Macroeconomics from the Beginning: The General Theory, Ancient Markets, and the Role of Interest*, Neuchâtel and Paris: Recherches et Publications.
- 2007b, "What happened in the Near East ca. 2000 BC?," in E. H. Seland (ed.), *The Indian Ocean in the Ancient Period: Definite Places, Translocal Exchange* (BAR International Series 1593), Oxford: Archaeopress, pp. 9–22.
- WARNIER, J.-P., 1985, *Échanges, développement et hiérarchies dans le Bamenda pré-colonial (Cameroun)*, Stuttgart: Franz Steiner.

- WASSAF, 'Abdullah, 1871 [1300–1328], *Tazjiyatu-l Amsar wa Tajriyatu-l Asar*, trans. H. M. Elliot and J. Downson (eds.), *The History of India as Told by Its Own Historians*, vol. III, London: Trübner and Co.
- WATSON, A. M., 1983, *Agricultural Innovation in the Early Islamic World: The Diffusion of Crops and Farming Techniques, 700–1100*, Cambridge University Press.
- The Wealth of India: A Dictionary of Indian Raw Materials and Industrial Products*, 1948–1976, 11 vols., New Delhi: Council of Scientific and Industrial Research (vol. 1 reissued in 1985).
- WATTS, P. M., 1985, "Prophecy and discovery: on the spiritual origins of Christopher Columbus's 'Enterprise of the Indies'," *American Historical Review*, 90 (1–2), pp. 73–102.
- WEBER, M., 1921/1972, "Die Stadt: eine soziologische Untersuchung," *Archiv von Sozialwissenschaft und Sozialpolitik*, 47, pp. 621–772 (published as ch. 8 in *Wirtschaft und Gesellschaft*, 5th edn., Tübingen, 1972, pp. 727–814).
- 1978, *Economy and Society: An Outline of Interpretive Sociology*, University of California Press.
- 1998, *Économie et société dans l'Antiquité*, preceded by *Les causes sociales du déclin de la civilisation antique*, Paris: La Découverte (1st edn. 1909).
- 2008, *The Protestant Ethic and the Spirit of Capitalism*, W. W. Norton (1st edn. 1930).
- WEBBER, R. P., 1853, *Dictionnaire malgache-français rédigé selon l'ordre des racines, par les Missionnaires Catholiques de Madagascar et adapté aux dialectes de toutes les provinces*, Île Bourbon: Etablissement Malgache de Notre-Dame de la Ressource.
- WEITZMAN, M., 2012, "GHG targets as insurance against catastrophic climate damages," *Journal of Public Economic Theory*, 14 (2), pp. 221–244.
- WETTERSTROM, W. and WRIGHT, H. T., 1992, "Une contribution à la paléoethnobotanique du plateau central de Madagascar," trans. C. Blanchard-Latreyte, *Taloha*, 11, pp. 147–166.
- WBGU, 2007, *Flagship Report 2007: World in Transition: Climate Change as a Security Risk. A Report by the German Advisory Council on Global Change (WBGU)*, London and Sterling: Earthscan.
- WHEATLEY, P., 1959, "Geographical notes on some commodities involved in Sung maritime trade," *Journal of the Malayan Branch of the Royal Asiatic Society*, 32, pp. 1–140.
- 1961, *The Golden Chersonese. Studies in the Historical Geography of the Malay Peninsula before A. D. 1500*, Kuala Lumpur: University of Malaya Press.
- 1975, "Analecta Sino-Africana Recensa," in N. Chittick and R. Rotberg (eds), *East Africa and the Orient*, London and New York: Holmes and Meier, Africana Publishing Co., pp. 76–114.
- 1983, *Nagara and Commandery: Origins of the Southeast Asian Urban Traditions*. University of Chicago Press.
- WHITCOMB, I., 1975, "The archaeology of Oman: a preliminary discussion of the Islamic periods," *Journal of Oman Studies*, 1, pp. 125–127.
- WHITEHOUSE, D., 2001, "East Africa and the maritime trade of the Indian Ocean, AD 800–1500," in B. S. Amoretti (ed.), *Islam in East Africa: New Sources*, Rome: Herder, pp. 411–424.
- WHITELAW, G., 1994, "Kwagandaganda: settlement patterns in the Natal early Iron Age," *Natal Museum Journal of the Humanities*, 6, pp. 1–64.
- WHITMORE, J. K., 1983, "Vietnam and the monetary flow of eastern Asia, thirteenth to eighteenth centuries," in J. F. Richards (ed.), *Precious Metals in the Later Medieval and Early Modern Worlds*, Durham, NC: Carolina Academic Press, pp. 363–394.
- WICKS, R. S., 1992, *Money, Markets and Trade in Early Southeast Asia: The Development of Indigenous Monetary Systems to AD 1400*, New York and Ithaca, NY: Cornell University Press.
- WILENSKY, J., 2002, "The magical Kunlun and 'devil slaves': Chinese perceptions of dark-skinned people and Africa before 1500," V. H. Mair (ed.), *Sino-Platonic Papers* no. 122, Philadelphia: University of Pennsylvania.

- WILKINSON, D., 1987, "Central civilization," *Comparative Civilizations Review*, 17 (Autumn), pp. 31-59.
- 1995a and b, "Central civilization" and "Civilizations are world systems!," in S. K. Sanderson (ed.), *Civilizations and World Systems: Studying World-Historical Change*, Walnut Creek, CA, London, and New Delhi: Altamira Press, pp. 46-74 and pp. 234-246.
- 2000, "Civilizations, world systems and hegemonies," in R. A. Denemark, J. Friedman, B. K. Gills, and G. Modelski (eds.), *World System History: The Social Science of Long-Term Change*, London and New York: Routledge, pp. 54-84.
- WILKINSON, J. C., 1981, "Oman and East Africa: new light on early Kilwan history from Omani sources," *International Journal of African Historical Studies*, 14 (2), pp. 272-305.
- WILKINSON, R. J., 1932, *A Malay-English Dictionary*, 2 vols., Mytilene: Salavopoulos and Kinderlis.
- WILLCOX, G., 2005, "The distribution, natural habitats and availability of wild cereals in relation to their domestication in the Near East: multiple events, multiple centres," *Vegetation History and Archaeobotany*, 14 (4), pp. 534-541.
- WILLIS, J., 1993, *Mombasa, the Swahili, and the Making of the Mijikenda*, Oxford: Clarendon Press.
- WILSON, T. H., 1982, "Spatial analysis and settlement patterns on the East African Coast," *Paideuma*, 28, pp. 201-219.
- WILSON, T. H. and OMAR, A. L., 1997, "Archaeological investigations at Pate," *Azania*, 32, pp. 31-76.
- WINK, A., 1990, *Al Hind, the Making of the Indo-Islamic World*, vol. I: New Delhi: Oxford University Press.
- 1997, *Al Hind, the Making of the Indo-Islamic World*, vol. II: *The Slave Kings and the Islamic Conquest*, Leiden, New York, and Cologne: Brill.
- 2004, *Al Hind, the Making of the Indo-Islamic World*, vol. III: *Indo-Islamic Society fourteenth-15th Centuries*, Leiden, New York, and Cologne: Brill.
- WISSEMAN CHRISTIE, J., 1990, "Trade and state formation in the Malay Peninsula and Sumatra, 300 BC-AD 700," in J. Kathirithamby-Wells and J. Villiers (eds.), *The Southeast Asian Port and Polity: Rise and Demise*, Singapore University Press, pp. 39-60.
- 1995, "State formation in early maritime Southeast Asia," *Bijdragen tot de Taal-, Land- en Volkenkunde*, 151-II, pp. 235-288.
- 1998a, "The medieval Tamil-language inscriptions in Southeast Asia and China," *Journal of Southeast Asian Studies*, 29 (2), pp. 239-268.
- 1998b, "Javanese markets and the Asian sea trade boom of the tenth to thirteenth centuries AD," *Journal of Southeast Asian Studies*, 41 (3), pp. 344-381.
- 1999, "Asian Sea trade between the tenth and the thirteenth centuries and its impact on the states of Java and Bali," in H. P. Ray (ed.), *Archaeology of Seafaring: The Indian Ocean in the Ancient Period*, New Delhi: Pragati Publications, pp. 221-270.
- 2001, "Revisiting early Mataram," in M. J. Klokke and K. R. Van Kooij (eds.), *Fruits of Inspiration: Studies in Honour of Prof. J. G. De Casparis, Retired Professor of the Early History and Archeology of South and Southeast Asia at the University of Leiden, the Netherlands, on the Occasion of His 85th Birthday*, Groningen: Egbert Forstein, pp. 25-55.
- WITTFOGEL, K. A., 1957, *Oriental Despotism: A Comparative Study of Total Power*, New Haven, CT, and London: Yale University Press.
- WOLF, E. R., 1982, *Europe and the People Without History*, Berkeley: University of California Press.
- WOLFF, J., 1994, "The place of plant names in reconstructing Proto-Austronesian," in A. K. Pawley and M. D. Ross (eds.), *Austronesian Terminologies: Continuity and Change (Pacific Linguistics C-127)*, pp. 511-540.

- WOLTERS, O., 1958, "Tambralinga," *Bulletin of the School of Oriental and African Studies*, 21 (3), pp. 587–607.
- 1966, "A note on the capital of Srīvijaya during the eleventh century," in Ba Shin, J. Boisselier, and A. B. Griswold (eds.), *Essays Offered to G. H. Luce by His Colleagues and Friends in Honour of His Seventy-Fifth Birthday*, vol. 1: *Papers on Asian History, Religion, Languages, Literature, Music, Folklore, and Anthropology*, Ascona: Artibus Asiae, pp. 225–239.
- 1967, *Early Indonesian Commerce: A Study of the Origins of Srivijaya*, Ithaca, NY: Cornell University Press.
- 1970, *The Fall of Srivijaya in Malay History*, London: Asia Major Library, Lund Humphries.
- 1999, *History, Culture, and Religion in Southeast Asian Perspectives* (Southeast Asian Program Publications no. 26), Ithaca, NY: Cornell University Press (1st edn. 1982).
- WONG, D. C., 2015, "Great Buddhist monasteries in China and Japan in the seventh and eighth centuries," workshop "Linked states of knowledge: libraries, literacies, and material histories," University of Massachusetts, Amherst.
- WONG, R. B., 1997, *China Transformed: Historical Change and the Limits of European Experience*, Ithaca, NY: Cornell University Press.
- 1999, "The political economy of agrarian empire and its modern legacy," in T. Brook and T. Blue (eds.), *China and Historical Capitalism: Genealogies in Sinological Knowledge*, Cambridge University Press, pp. 210–245.
- 2002, "The search for European differences and domination in the early modern world," *American Historical Review*, 107 (2), pp. 447–469.
- WOOD, F., 1995, *Did Marco Polo Go to China?*, London: Secker and Warburg.
- WOOD, M., 2000, "Making connections: relationships between international trade and glass beads from the Shashe-Limpopo area," in M. Leslie and T. Maggs (eds.), *African Naissance: The Limpopo Valley 1000 Years Ago*, Cape Town: South African Archaeological Society, pp. 78–90.
- 2005, "Glass beads and pre-European trade in the Shashe-Limpopo Region," thesis, University of Witwatersrand, Johannesburg.
- 2011, "A glass bead sequence for Southern Africa from the 8th to the 16th century AD," *Journal of African Archaeology*, 9 (1), pp. 67–84.
- 2012, *Interconnections: Glass Beads and Trade in Southern and Eastern Africa and the Indian Ocean – 7th to 16th Centuries AD*, Uppsala University, Department of Archaeology and Ancient History.
- 2015, "Divergent patterns in Indian Ocean trade to East Africa and Southern Africa between the 7th and 17th centuries CE: the glass bead evidence," *Afriques*, 6, <http://afriques.revues.org>
- WOOD, M., DUSSUBIEUX, L., and WADLEY, L., 2009, "A cache of 5000 glass beads from the Sibudu Cave from Iron Age occupation," *Southern African Humanities*, 21, pp. 239–261.
- WOOD, M., PANIGHELLO, S., ORSEGA, E. F., ROBERTSHAW, P., VAN ELTEREN, J. T., CROWTHER, A., HORTON, M., and BOIVIN, N., 2016, "Zanzibar and Indian Ocean trade in the first millennium CE: the glass bead evidence," *Archaeological Anthropological Science*, doi: 10.1007/s12520-015-0310-z
- WOUDEN, F. A. E. VAN, 1935, *Types of Social Structure in Eastern Indonesia*, Leiden: J. Ginsberg.
- WRIGHT, H. T., 1979, "Observations sur l'évolution de la céramique traditionnelle en Imerina centrale," *Taloha*, 8, pp. 7–28.
- 1984, "Early sea-farers of the Comoro Islands: the Dembeni Phase of the 1xth–xth centuries AD," *Azania*, 19, pp. 13–59 (with contributions from C. Sinopoli, L. Wojnarowski, E. S. Hoffman, S. L. Scott, R. W. Redding, and S. M. Goodman).

- 1992a, "Early Islam, oceanic trade and town development on Nzwani: the Comorian archipelago in the XIth-XVth centuries AD," *Azania*, 27, pp. 81-128 (with contributions from J. E. Knudstad, L. W. Johnson, and R. W. Redding).
- (ed.), 1992b, "Datations absolues des sites archéologiques du centre de Madagascar," *Taloha*, 11, pp. 7-28.
- 1993, "Trade and politics on the eastern littoral of Africa, AD 800-1300," in T. Shaw, P. Sinclair, B. Andah, and A. Okpoko (eds.), *The Archaeology of Africa: Food, Metals and Towns*, London and New York: Routledge, pp. 657-671.
- (ed.), 2007, *Early State Formation in Central Madagascar: An Archaeological Survey of Western Avaradrano* (Museum of Anthropology, Memoir no. 43), Ann Arbor: University of Michigan Museum of Anthropology.
- WRIGHT, H. T. ANDRIANAIVOARIVONY, R., BAILIFF, I., BURNEY, D., HAAS, H., RAHARIJAONA, V., RAKOTOVOLOLONA, S., RASAMUEL, D., and DEWAR, R., 1992. "Datation absolue de sites archéologiques du centre de Madagascar: présentation des déterminations," *Taloha*, 11, pp. 121-146.
- WRIGHT, H. T. and DEWAR, B., 2000, "Northeast Madagascar in the XVth- XVIIIth centuries," in C. Allibert and N. Rajaonarimanana (eds.), *L'extraordinaire et le quotidien: variations anthropologiques. Hommage au professeur Pierre Vérin*, Paris: Karthala, pp. 287-311.
- WRIGHT, H. T., DEWAR, R., RADIMILAHY, C., and DARSOT RASOLOFOMAMPIANINA, L., 2011, "Early settlement in the region of Fenoarivo Atsinanana," in C. Radimilaky and N. Rajanarimanana (eds.), *Civilisations des Mondes Insulaires*, Paris: Karthala, pp. 677-740.
- WRIGHT, H. T. and FANONY, F., 1992, "L'évolution des systèmes d'occupation des sols dans la vallée de la Mananara au Nord-Est de Madagascar," trans. C. Allibert, *Taloha*, 11, pp. 16-64.
- WRIGHT, H. T., RADIMILAHY, C., and ALLIBERT, C., 2005, "L'évolution des systèmes d'installation dans la baie d'Ampasindava et à Nosy-Be," *Taloha*, 14-15, www.taloha.info/document.php?id=137
- WRIGHT, H. T. and RAKOTOARISOA, J.-A., 1989, "The archeology of complex societies in Madagascar: case-studies in cultural diversification," in P. J. J. Sinclair and J. A. Rakotoarisoa (eds.), *Urban Origins in Eastern Africa: Proceedings of the 1989 Madagascar Workshop*, Stockholm: Swedish Central Board of National Antiquities, pp. 21-31.
- 1997, "Cultural transformations and their impacts on the environments of Madagascar," in S. M. Goodman and B. D. Patterson (eds.), *Natural Change and Human Impact in Madagascar*, Washington, DC: Smithsonian Institution Press, pp. 309-331.
- WRIGHT, H. T., RAKOTOARISOA, J.-A., HEURTEBIZE, G., and VÉRIN, P., 1993, "The evolution of settlement systems in the Efaho River valley, Anosy: a preliminary report on the archaeological reconnaissances of 1983-1986," *Bulletin of the Indo-Pacific Prehistory Association*, 13, pp. 61-93.
- WRIGHT, H. T., VÉRIN, P., RAMILISONINA, BURNEY, D., BURNEY, L. P., and MATSUMOTO, K., 1996, "The evolution of settlement systems in the Bay of Boeny and the Mahavavy River valley, north-western Madagascar," *Azania*, 31, pp. 37-73.
- WYATT, D. K., 1975, *The Crystal Sands, the Chronicles of Nagara Sri Dharmmarāja*, Data Paper no. 98, Southeast Asia Program, Cornell University, Ithaca, NY.
- WYNNE-JONES, S., 2013, "The public life of the Swahili stonehouse, 14th-15th centuries AD," *Journal of Anthropological Archaeology*, 32 (4), pp. 759-773.
- 2016, *A Material Culture: Consumption and Materiality on the Coast of Precolonial East Africa*, Oxford University Press.
- WYNNE-JONES, S. and FLEISHER, J., 2012, "Coins in context: local economy, value and practice on the East African Swahili coast," *Cambridge Archaeological Journal*, 22 (1), pp. 19-36.
- YAMAMURA, K. and KAMIKI, T., 1983, "Silver mines and Sung coins: a monetary history of medieval and modern Japan in international perspective," in J. F. Richards (ed.), *Precious*

- Metals in the Later Medieval and Early Modern Worlds*, Durham, NC: Carolina Academic Press, pp. 329–362.
- YANG BAO, BRAEUNING, A., JOHNSON, K. R., and YAFENG SHI, 2002, “General characteristics of temperature variation in China during the last two millennia,” *Geophysical Research Letters*, 29 (1324), doi: 10.1029/2001GL014485.
- YERASIMOS, S., 1980, *see* POLO, M., 1980.
- YINGSHENG, L., 2000, “An inscription in memory of Sayyid Bin Abu Ali: a study of relations between China and Oman from the eleventh to the fifteenth century,” in V. Elisseeff (ed.), *The Silk Roads, Highways of Culture and Commerce*, UNESCO Publication, New York and Oxford: Berghahn Books, pp. 122–126.
- YOUNG, O. R., BERKHOUT, F., GALLOPIN, G. C., JANSSEN, M. A., OSTROM, E., and VAN DER LEEUW, S., 2006, “The globalization of socio-ecological systems: an agenda for scientific research,” *Global Environmental Change*, 16 (3), pp. 304–316.
- YULE, H. and BURNELL, A. C., 1968, *Hobson-Jobson: A Glossary of Colloquial Anglo-Indian Words and Phrases*, 2nd edn., New Delhi: Munshiram Manoharlal.
- ZHANG, D. D., ZHANG, J., LEE, H. F., and HE, Y.-Q., 2007, “Climate change and war frequency in eastern China over the last millennium,” *Human Ecology*, 35 (4), pp. 403–414.
- ZHANG, P. *et al.*, 2008, “A test of climate, sun, and culture relationships from an 1810-year Chinese cave record,” *Science*, 322, pp. 940–942.
- ZHAO, B., 2012, “Global trade and Swahili cosmopolitan material culture: Chinese-style ceramic shards from Sanje ya Kati and Songo Mnara (Kilwa, Tanzania),” *Journal of World History*, 23 (1), pp. 41–86.
- 2014, “Vers une expertise plus fine et une approche plus historique de la céramique chinoise de la nécropole de Vohémar,” *Études Océan Indien*, 46–47, pp. 91–103.
- 2015a, “La céramique chinoise à Sharma: pour un essai d’étude typo-chronologique et spatiale,” in A. Rougeulle (ed.), *Sharma: un entrepôt de commerce médiéval sur la côte du Hadramawt (Yémen, ca 980–1180)*, Oxford: Archaeopress, pp. 277–321.
- 2015b, “Chinese-style ceramics in East Africa from the 9th to 16th century: a case of changing value and symbols in the multi-partner global trade,” *Afriques*, 6 (“L’Afrique orientale et l’océan Indien: connexions, réseaux d’échanges et globalisation”), <http://afriques.revues.org>
- ZORC, R., 1994, “Austronesian culture history through reconstructed vocabulary,” in A. K. Pawley and M. D. Ross (eds.), *Austronesian Terminologies: Continuity and Change (Pacific Linguistics C-127)*, pp. 541–594.
- ZUILLI, M., 2008, *Société et économie de l’Espagne au XVIe siècle*, Palaiseau: Les Éditions de l’École Polytechnique.
- ZURNDOERFER, H. T., 1999, “Another look at China, money, silver, and the 17th century crisis,” *Journal of the Economic and Social History of the Orient*, 42 (3), pp. 396–412.

INDEX OF GEOGRAPHICAL NAMES

- Abaya, 571
 Abbasid Empire, 6–7, 12, 17,
 45–70, 149, 185, 639, 667, 669,
 671, 672, 673, 674, 676
 Abyssinia, 306, 317, 322, 490, 519,
 533, 656
 Aceh, 198, 374, 425, 460, 497, 498,
 503, 574, 609, 678, 679
 Achaemenid Empire, 660, 665
 Achalapura, 80
 Achsiket, 49
 Acre, 163, 284, 285, 311, 312
 Adal, 451
 Aden, 46, 65, 70, 133, 157, 216, 220,
 230, 240, 284, 291, 293, 295, 301,
 302, 303, 304, 306, 307, 308,
 309, 313, 315, 316, 317, 318, 319,
 320, 321, 322, 323, 324, 325, 326,
 327, 328, 332, 342, 353, 355, 359,
 363, 371, 381, 382, 434, 443, 447,
 448, 454, 461, 462, 463, 479, 480,
 485, 489, 490, 502, 506, 519, 520,
 524, 525, 531, 532, 533, 534, 537,
 546, 551, 552, 573, 602, 603, 604,
 605, 607, 648, 676
 Aden (Gulf of), 136
 Aegean Sea, 155, 172, 442
 Afghanistan, 3, 25, 44, 67, 111, 176,
 216, 217, 229, 232, 630
 Africa, 9, 37, 38, 58, 60, 67, 68, 124,
 165, 172, 196, 218, 246, 261, 296,
 324, 355, 368, 374, 379, 391, 392,
 393, 396, 401, 406, 427, 433, 435,
 437, 438, 439, 442, 446, 467, 486,
 494, 501, 520, 531, 537, 543, 544,
 550, 584, 585, 586, 588, 589, 595,
 596, 610, 617, 620, 623, 627, 629,
 652, 653, 665, 669, 674, 676, 677,
 680, 682
 Africa (East), 7, 11, 17, 38, 46, 47,
 49, 50, 54, 59, 61, 68, 91, 105,
 106–137, 140, 149, 156, 157, 158,
 159, 162, 166, 170, 173, 175, 177,
 196, 197, 208, 210, 218, 235, 246,
 265, 279, 283, 284, 295, 301, 302,
 309, 317, 318, 319, 320, 323, 328,
 329–370, 371, 374, 375, 376, 377,
 379, 380, 382, 383, 384, 385, 389,
 390, 393, 394, 395, 396, 397,
 400, 401, 402, 409, 415, 425,
 426, 434, 440, 441, 449, 454, 457,
 463, 465, 467, 471, 478, 479, 487,
 490, 493, 519, 521, 534, 535–552,
 554, 555, 556, 557, 558, 559, 569,
 570, 575, 586, 588, 589, 590, 591,
 592, 596, 597, 599, 603, 607,
 608, 611, 612, 615, 617, 620, 629,
 630, 637, 647, 648, 649, 652, 653,
 654, 657, 658, 659, 660, 661, 662,
 668, 678, 688
 Africa (North), 6, 8, 17, 43, 47, 49,
 50, 52, 54, 70, 149, 151, 158, 165,
 167, 171, 295, 302, 314, 318, 331,
 333, 346, 439, 440, 441, 519, 623,
 664, 669
 Africa (sub-Saharan), 4, 7, 15, 52,
 107, 114, 115, 117, 131, 140, 149,
 158, 160, 166, 311, 337, 338, 368,
 372, 375, 388, 392, 449, 519, 542,
 629, 669, 673
 Africa (West), 50, 51, 52, 53, 54,
 112, 120, 131, 157, 159, 172, 250,
 302, 303, 309, 313, 314, 315, 329,
 359, 402, 439, 440, 450, 455, 456,
 530, 545, 552, 605, 658, 673
 Aghnā, 381
 Ahar, 73
 Ahichchhatra, 73
 Ahmadnāgar (sultanate), 456, 482
 Ahmedabad, 478, 479
 Ahvaz, 48, 64
 Ahwāb (al-), 283
 Ahwāz, 64, 301
 Air Sugihan, 90
 Ajanta, 80, 98, 487
 Ak Koyunlu state, 518, 529
 Akan, 441
 Akkad, 620
 Akkadian Empire, 620, 622,
 623, 639
 Akumbu, 54
 Alamkonda (kingdom), 488
 Alaoitra (lake), 401, 411, 582
 Alasora, 414, 427
 Albania, 516
 Albert (lake), 365
 Alborz Mountains, 69
 Aleppo, 149, 175, 281, 285, 293,
 294, 307, 326, 443, 519, 522,
 528, 607
 Alexandria, 53, 162, 175, 197, 208,
 216, 234, 247, 286, 298, 301,
 307, 309, 311, 312, 313, 315, 322,
 443, 450, 515, 517, 519, 523, 525,
 526, 527, 530, 532, 533, 604,
 607
 Alodia, *see* Alwa (kingdom)
 Alps, 8, 14, 163
 Altai, 16, 51, 68
 Alwa (kingdom), 47, 53, 54,
 306, 451
 Amalfi, 8, 14, 57, 301
 Amanda, 128
 Amanda-Vohidolo, 389
 Amaravati (kingdom), 256
 Ambariotelo (archipelago),
 374, 557
 Ambaro Atsimo, 557
 Ambataria, 568
 Ambilobe, 374, 559, 561
 Ambinanibe, 387, 388
 Amboaimohehy, 141
 Ambodisiny, 394, 568
 Ambohabe, 143, 457, 568, 569, 571,
 576, 589, 595, 597, 598, 616
 Ambohidahy, 580
 Ambohimambola, 387
 Ambohimanana, 386, 387, 580,
 582
 Ambohimanga, 582
 Ambohipanompo, 582
 Ambohitrakanjaka, 582
 Ambohitsara, 378, 403
 Ambongo, 423
 Amçoçe (chiefdom), 544

- Americas, 20, 34, 434, 453, 454, 455, 604, 609, 620, 665, 666, 680, 682, 684, 685, 688, 689
- Amoy, 470
- Amparihibe, 140
- Amparihibe (lake), 373
- Ampasindava (Bay of), 408, 561, 562, 563, 613, 615
- Amu Darya (river), 515, *see also* Oxus (river)
- Anahilavāḍa, 79, 216, 217, 236, 239, 242, 303
- Anakara culture, 594
- Analamanitra, 582
- Analamanofy, 413, 590
- Anantapur, 488
- Anatolia, 154, 155, 197, 282, 286, 290, 293, 303, 308, 310, 312, 314, 450, 519, 625, 626
- Andalusia, 49, 53, 167, 177, 182, 333
- Andaman (islands), 227
- Andaro, 128, 388, 389
- Andavakalika, 387
- Andavakoera (Gorge of), 376
- Andevoranto, 395
- Andhra, 244, 245, 488
- Andhra Pradesh, 80, 84–86, 219, 221, 224, 226, 241, 258, 511
- Andranosoa, 128, 141, 177, 373, 388, 389, 580, 583
- Andranosoa (river), 389
- Androbeizaha. *see* Fort-Dauphin
- Androvontsy, 388, 389
- Androy, 128, 140, 177, 341, 371, 372, 387, 388, 390, 415, 424, 547, 580, 583, 648
- Angavobe, 582
- Angavobe culture, 581
- Angazija (island), 137
- Angkor, 95, 100, 156, 221, 254, 255, 257, 260, 269, 273, 274, 275, 341, 509
- Angkor (kingdom), 95, 227, 275
- Angkor Thom, 255
- Angkor Wat, 255, 256
- Angoche, 540, 548, 608
- Angola, 440, 454, 614
- Anhui, 34, 212
- Anjazija, 553
- Anjoaty, 568
- Anjouan (island), III, 124, 125, 126, 127, 129, 137, 142, 344, 352, 366, 367, 370, 552, 553
- Ankadivory, 386, 387, 580
- Ankara, 297, 522
- Ankaratra, 125
- Ankatso, 387, 582
- Ankatso culture, 581
- Ankay, 580
- Ankazomiriotra, 387
- Ankoala, 555, 562
- Ankole, 337
- Annam, 197, 199, 207, 448, 460
- An-nan, 31, 87
- Anorotsangana (Bay of), 562, 570, 613
- Anosy, 17, 128, 129, 141, 143, 177, 350, 358, 378, 384, 386, 387, 388, 390, 392, 396, 397, 404, 405, 409, 412, 415, 417, 424, 457, 547, 559, 567, 568, 576, 578, 580, 582–583, 592, 593, 596, 600, 613
- Anosy (kingdom), 410
- Antalaha, 393, 568
- Antalya, 282, 450, 517
- Antambahoaka culture, 413
- Antanambe culture, 578, 580, 581, 582
- Antananarivo, 143, 373, 386, 414, 428, 565, 578, 580, 582
- Antandroy, 422
- Antanimenabe, 139
- Antankaraña, 374, 422, 423
- Antanosy, 422
- Antanosy culture, 404, 409
- Antemoro, 397, 409, 551, 558, 590
- Antemoro (kingdom), 108, 358, 404, 405, 550, 556, 569, 575–577, 589–598
- Antemoro culture, 349, 551, 558, 576–577, 585, 589–598
- Antetikala, 376
- Antioch, 59, 64, 155, 281
- Antongil (Bay of), 17, 142, 372, 376, 378, 402, 403, 561
- Antrañokaràna, 555, 561
- Antsiranana, 376
- Antsiranana (Bay of), 571
- Antsoheribory, 556, 562, 611
- Antwerp, 436, 457, 603
- Anurādhāpura, 87
- Aouker, 51
- Apologos, 669
- Aqaba, 317
- al-Aqsa, 54
- Arabia, 6, 13, 17, 39, 42, 43, 47, 55, 64, 67, 69, 77, 81, 107, 108, III, II3, II9, 120, 123, 141, 149, 157, 196, 197, 208, 218, 224, 235, 236, 237, 246, 247, 249, 283, 285, 295, 313, 318, 319, 320, 325, 340, 344, 345, 346, 349, 352, 354, 369, 381, 382, 391, 393, 395, 396, 403, 408, 444, 462, 463, 467, 480, 485, 487, 492, 506, 519, 521, 533, 534, 537, 538, 551, 558, 577, 579, 594, 597, 598, 599, 620, 623, 625, 647, 654, 663
- Arabian Sea, 210, 332, 333
- Aragon, 306, 437, 451, 686
- Arakan, 94, 253, 448, 493, 494
- Aral Sea, 6, 25, 288
- Ardabil, 324
- Arguin (island), 440
- Arikamedu, 227
- Arindrano, 409
- Armenia, 14, 44, 65, 67, 68, 154, 199, 210, 288, 441
- Armenia, Little (kingdom), 310, 312
- Aru, 462
- Arumda, 479
- Arzila, 441
- As'ā (al-), 318
- Asambalahy, 390, 391, 559, 584
- Ashikaga (shogunate), 460, 470
- Asia (Central), 3, 4, 5, 6, 12, 13, 16, 18, 19, 21, 23, 24, 25, 27, 28, 29, 30, 31, 33, 34, 35, 43, 44, 45, 46, 48, 49, 50, 51, 54, 58, 61, 66, 67, 68, 70, 72, 77, 122, 148, 156, 160, 161, 163, 164, 165, 167, 170, 173, 174, 177, 185, 188, 199, 201, 205, 206, 232, 234, 235, 243, 249, 281, 288, 289, 290, 291, 295, 297, 302, 303, 310, 434, 435, 438, 457, 460, 471, 481, 516, 517, 523, 620, 624, 626, 627, 628, 629, 633, 642, 652, 656, 658, 661, 664, 666, 670, 682
- Assam, 83, 93, 216, 228, 251
- Assyria, 622, 623, 625
- Assyrian Empire, 625, 626, 665
- Astrakhan, 9, 235
- Asturias, 6, 44
- Athar, 121, 317
- Athens, 627, 667
- Atlantic Ocean, 15, 44, 355, 609
- Australia, 361, 363, 434, 463
- Ava (kingdom), 512
- Avaradrano, 582
- Avargyn Balas, 160, 161
- Avignon, 151, 170, 175

- Awdāghust, 51, 52, 54
 Axum, 7, 660
 ‘Aydhab, 303, 307, 308, 309, 311, 313, 315, 316, 322, 525, 666
 ‘Ayn Jālūt, 289, 309
 Ayuthiā, 272, 274, 277, 497, 510, 511
 Ayuthiā (state/kingdom), 176, 274–275, 448, 452, 505, 509–511, 512
 Ayyūbid Empire, 307–309, 310, 320, 321, 660, 673, 674
 Azelik, 159
 Azerbaidjan, 288, 324
 Azores, 439, 467
 Azov, 172

 Bāb al-Mandab, 524, 628
 Babay, 582
 Babuyan (islands), 28
 Babylonia, 55, 515, 623
 Babylonian Empire, 623, 625, 626
 Baccanore, 248, 324, 325, 606
 Bactria, 620
 Bactria-Margiana, 629
 Badrisar, 284
 Baekgang, 28
 Bagamoyo (East Africa), 107, 113, 114, 121, 125, 368
 Bagamoyo (Maore), 352, 368
 Baghdad, 3, 6, 9, 10, 13, 17, 30, 31, 39, 42, 45, 49, 52, 53, 57, 61, 63, 64, 65, 66, 68, 69, 70, 81, 114, 118, 149, 155, 161, 162, 172, 177, 185, 230, 231, 236, 247, 280, 282, 287, 289, 291, 296, 297, 300, 302, 307, 308, 309, 321, 326, 332, 333, 443, 457, 515, 518, 620, 644
 Bago, 536
 Bahamas (islands), 453
 Bahmani (sultanate), 173, 176, 241, 244, 245, 247, 249, 447, 456, 480–483, 484, 485, 486, 523, 532, 533, 671, 677
 Bahrain, 17, 38, 39, 67, 69, 121, 135, 147, 247, 249, 283, 284, 293, 295, 317, 349, 605
 Bait Mala, 451
 Balagami, 225
 Balangai, 104
 Balasagun, 23
 Balawi, 258
 Balearic Islands, 306
 Bali (island), 24, 88, 101, 102, 103, 104, 261, 265, 271, 272, 277, 417, 425, 502
 Balipattana, 219
 Balkans, 9, 151, 446
 Balkh, 43, 64, 70, 216, 235, 288
 Baltic region, 656
 Baltic Sea, 9, 25, 163, 165, 200, 216
 Baly (Bay of), 125, 141
 Bambala, 561, 584
 Bambandyanalo, 334, 336, 546
 Bambouk, 173
 Bamenda Plateau, 657
 Banbhore, 59, 60, 81, 130, *see also* Daybul
 Banda (island), 279, 500, 501, 503, 507
 Bandar Abbas, 609
 Bandar Banī Ismā’il, 571
 Bandar Hadūda, 571
 Bandar Hayt, 571
 Bandar Kūrī, 571
 Bandar Kūs, 571
 Bandar al-Nūb, 570
 Bandar Si’bān, 571
 Bangka (island), 73, 89, 261, 504
 Bangladesh, 86, 93, 179
 Banjar, 408
 Banjarmasin, 277
 Banteay Prei Nokor, 95
 Banten, 469, 470, 503, 504, 609
 Banten Girang, 266
 Bara, 378
 Barāwa, 110, 111, 330, 342, 346, 347, 349, 352, 462, 463, 465, 467, 539, 552
 Barcelona, 175, 437, 441
 Bari, 154
 Baroda, 479
 Barudah, 72
 Barus, 88, 104, 198, 225, 228, 257, 258, 259
 Barygaza, 669
 Bashkent, 518
 Basra, 11, 38, 39, 43, 56, 58, 59, 60, 61, 62, 63, 64, 65, 68, 70, 81, 112, 135, 243, 281, 283, 290, 291, 294, 443, 520, 559, 605, 607, 669
 Basrur, 447, 486, 487, 678
 Bassein, 253, 272, 512, 605
 Batangas, 104
 Batavia, 503
 Bawdwin, 255
 Bayāna, 229
 Bayon, 255
 Bazaruto (island), 110
 Bebetin, 104
 Begho, 52, 158, 440
 Beijing, 18, 160, 161, 170, 203, 205, 206, 209, 293, 434, 459, 468, 516, 519
 Beirut, 175, 443, 515
 Bekatrafay, 583
 Bekily, 584
 Belgaum, 481
 Belitung (island), 27, 261, 504
 Bemanevika, 376, 377, 389, 568, 571
 Bemarivo (river), 377, 571
 Benadir, 348, 349
 Benametapa, 541
 Benavony, 378
 Bengal, 11, 13, 16, 60, 61, 73, 74, 75, 83–84, 91, 93, 94, 97, 98, 100, 173, 208, 216, 219, 221, 222, 225, 228–229, 231, 233, 235, 237, 244, 245, 246, 249, 250, 251, 255, 258, 268, 271, 275, 278, 328, 365, 410, 424, 447, 448, 452, 461, 462, 463, 469, 477, 478, 479, 480, 485, 486, 488, 491, 492, 494, 498, 500, 502, 506, 507, 508, 511, 512, 520, 574, 630
 Bengal (Bay of), 11, 40, 62, 93, 136, 160, 215, 219, 236, 247, 252, 253, 483, 506, 605, 676
 Bengal (Gulf of), 61, 93, 157, 210, 507, 512
 Bengal (sultanate), 221, 477, 492–495, 501, 523, 532, 633, 673
 Bengal Sea, 239
 Bengkulu, 259
 Benin, 52, 158, 440, 441
 Berar, 80, 83, 456, 482
 Berbera, 108, 110, 118, 196, 305, 339, 351, 537
 Berenice, 668
 Beropitike, 388, 389, 580
 Beruwala, 462
 Besançon, 442
 Betafo, 387
 Betahitra (river), 376
 Betsibōka (river), 138, 560
 Betsileo, 397, 398, 409, 413, 415, 417, 578, 587, 588, 595
 Betsimisaraka, 395, 397, 399, 426, 601
 Betsimitatatra, 428
 Bezanozano, 424

- Bharukaccha, *see* Broach
 Bhatkal, 485, 486, 487, 520, 609
 Bhimnagar, 216
 Bhitargarh, 93
 Bhubaneshwar, 233
 Bidar, 172
 Bidar (sultanate), 456, 482, 485
 Bigo, 337, 365
 Bihar, 83, 225, 228, 231, 493
 Bijāpur, 324, 365, 482, 609
 Bijāpur (sultanate), 456, 482
 Bīmārūh, 571
 Binh Dinh, 96, 512
 Binsu, 198
 Bipalo, 196
 Bi'r ar-Rubāhiyya, 309
 Bisaya, 104
 Black Sea, 9, 14, 15, 155, 160, 172, 174, 175, 286, 310, 311, 314, 316, 450, 451, 517, 528, 605
 Black Volta (river), 158
 BMAC (Bactria-Margiana Archaeological Complex), 620
 Bobali, 118
 Bobaomby, 393
 Bobonong Road, 336
 Boeny (Bay of), 376, 562
 Bohemia, 151
 Bohol (island), 28
 Boina, 560, 563, 570, 584, 611, 614
 Boina (Bay of), 376, 386, 393, 424, 557, 558, 560, 561, 570, 584, 611
 Bologna, 15, 152, 163, 166
 Bombay, 219, 303, 605, 606
 Bombetoka (Bay of), 376, 611
 Borivli caves, 219
 Borneo (island), 91, 183, 198, 262, 267, 278, 380, 448, 498
 Bornu, 440, 441
 Borobudur, 97, 98, 99, 263, 499
 Bosnia, 449, 516
 Bosphorus, 311
 Bosutswe, 115, 117, 131, 334, 360
 Botswana, 115, 116, 117, 131, 334, 336, 337, 338
 Bougie, 151
 Bouré, 173
 Brantas (river), 260
 Brantas (valley), 101
 Brazil, 446, 545, 574, 685
 Brindisi, 155
 Broach, 218, 248, 328, 479
 Bruges, 165, 172, 177, 436, 679, 686
 Brunei, 105, 183, 198, 252, 262, 265, 267, 279, 448, 469, 498, 500, 507, 513, 609
 Brussels, 686
 Bubat, 277, 278
 Buganda, 337
 Bugis, 500, 507
 Buhaya, 588
 Bui, 109, 119
 Bukhara, 10, 23, 44, 199, 205, 287, 288, 293, 516, 517
 Bukit Hasang, 259
 Bukit Seguntang, 89, 420
 Bulgar (city), 10
 Bulgar (state), 10
 Bulgaria, 14, 16, 151, 154, 175, 449, 516
 Bunyoro, 337, 588
 Bur Gao, 348, 374
 Burgundy, 686
 Burkina Faso, 52, 54, 116, 669
 Burma, 33, 85, 93, 95, 174, 176, 179, 228, 237, 240, 251, 252, 253, 254, 255, 258, 269, 272, 273, 274, 341, 353, 435, 448, 452, 468, 469, 473, 479, 492, 493, 510, 512, 536, 624, 667, 669, 678
 Bursa, 172, 450, 517
 Burundi, 337, 587, 588
 Butua, 540
 Butuan, 104, 265, 276
 Byzantine Empire, 6, 9, 10, 14, 17, 20, 24, 31, 43, 44, 52, 53, 54, 57, 58, 153, 154, 162, 172, 241, 280, 290, 300, 449, 451, 516, 517, 633, 641, 644, 664, 668, 670
 Byzantium, 7, 8, 9, 10, 15, 43, 44, 154, 155, 169, 172, 175, 177, 203–212, 286, 297, 311, 313, 333, 438, 442, 445, 449, 450, 516, 522, 528, 653, 667, 687
 Caban, 96
 Caffa, 172, 174, 286, 316, 442, 449, 457
 Cahors, 163
 Cairo, 66, 69, 149, 155, 157, 163, 172, 219, 230, 248, 285, 286, 294, 296, 301, 302, 303, 304, 306, 307, 309, 311, 312, 313, 315, 316, 318, 322, 326, 327, 333, 339, 440, 480, 515, 518, 519, 522, 528, 533, 539, 607, 656, 670
 Caishi, 191
 Calatu, 292
 Caldiran, 457, 518
 Calicut, 210, 221, 236, 246, 247, 248, 251, 278, 291, 295, 324, 325, 328, 363, 365, 433, 442, 447, 448, 454, 460, 461, 462, 463, 477, 479, 483, 485, 489, 490–491, 492, 494, 498, 506, 507, 520, 521, 524, 526, 530, 531, 532, 533, 573, 602, 603, 606, 607, 608, 678
 California, 658
 Cambay, 172, 198, 218, 235, 236, 242, 246, 247, 250, 251, 278, 284, 293, 295, 324, 325, 328, 335, 409, 410, 447, 452, 478, 479, 480, 481, 486, 492, 498, 506, 510, 513, 520, 526, 533, 537, 538, 540, 541, 546, 548, 551, 566, 599, 608, 612
 Cambodia, 24, 73, 93, 98, 134, 198, 209, 227, 228, 250, 253, 254, 257, 258, 260, 268, 270, 275, 341, 380, 423, 461, 509, 511, 513, 669; *see also* Khmer (state/kingdom/empire)
 Cambrai, 163
 Cambridgeshire, 8
 Cameroon, 657
 Canada, 659
 Canary Islands, 172, 453
 Candi Canggal, 97
 Candi Jao, 271
 Candi Loro Jonggrang, 100
 Candi Sewu, 97
 Candrapura, 219
 Canggal, 97
 Cannanore, 248, 479, 485, 489, 490, 506, 547, 574, 608, 609, 677, 678
 Canterbury, 165
 Canton, *see* Guangzhou (Canton)
 Cap d'Ambre, 570, 613
 Cape Saint-André, 571
 Cape Verde (islands), 439, 453, 494, 530
 Cappadocia, 622
 Caribbean, 439
 Carinthia, 443
 Carolingian Empire, 7–9, 13, 15, 17, 671
 Carthage, 626, 628
 Caspian Sea, 9, 164, 247, 293, 451, 482
 Castile, 151, 171, 437, 520, 686
 Castle Rock, 334

- Catalonia, 151, 306
 Cathay, 61, 169, 204, 297
 Caucasus, 3, 51, 68, 154, 290, 297, 309, 311, 624
 Cebu (island), 28, 498, 500
 Cengba, 196
 Ceuta, 313, 439, 442
 Ceylon, 38, 60, 246, 247, 466; *see* Sri Lanka
 Chad, 53, 157
 Chad (lake), 52
 Chagos (islands), 122, 135, 136, 500, 574
 Chaiya, 91, 92, 93, 252, 254, 256, 257, 259, 266
 Chaliyam, 324
 Chālūkya Empire (Bādāmi), 79, 80
 Chālūkya Empire (Kalyāna), 80, 216, 220–221, 224, 228, 232
 Chālūkya kingdom (Gujarat), 76, 79, 216, 217, 233, 235, 237, 238
 Champa, 24, 25, 61, 63, 93, 95–97, 99, 104, 134, 136, 179, 195, 207, 209, 215, 227, 255, 256, 258, 261, 263, 265, 267, 268, 273, 274, 353, 461, 462, 463, 503, 507, 508, 511, 635, 660
 Champagne, 154, 165, 171
 Chang'an, 10, 13, 18, 20, 23, 24, 27, 31, 33, 34, 35, 36, 45, 91
 Changsha, 27, 82, 119, 184, 319
 Chansen, 94
 Chanthaburi, 256
 Chao Phraya (region), 255
 Chao Phraya (river), 260, 275, 509, 624
 Chaozhou, 19
 Chartres, 200, 294
 Chaul, 247, 335, 481, 506, 520
 Chedzurgwe, 540
 Chengdu, 34, 188
 Chera (kingdom), 80, 103, 225, 240, 630
 Chi (kingdom), 181
 Chi (valley), 95
 Chiang Mai, 509
 Chibuene, 17, 109, 110, 111, 115, 116, 121, 127, 128, 129, 131, 133, 141, 341
 Chilka (lake), 86
 China, 3, 4–5, 6, 7, 10, 11, 16, 17, 18–41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 70, 72, 73, 76, 80, 81, 82, 84, 86, 87, 88, 89, 90, 91, 92, 93, 94, 96, 98, 102, 103, 104, 108, 112, 117, 123, 130, 132, 133, 135–136, 141, 147, 148, 150, 152, 154, 155–156, 159, 160, 161, 162, 163, 164, 165, 166, 168, 169, 170, 172, 173, 174, 175, 176, 178–215, 218, 219, 224, 225, 226, 227, 234, 235, 239, 240, 243, 245, 246, 247, 248, 249, 250, 251, 252, 253, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 281, 286, 288, 289, 292, 293, 296, 297, 298, 306, 309, 313, 314, 315, 317, 318, 319, 326, 327, 333, 336, 340, 341, 347, 356, 363, 403, 404, 421, 433, 434–435, 437, 438, 444, 445, 446, 448, 449, 450, 451, 452, 454, 455, 456, 458–476, 481, 487, 489, 492, 493, 494, 495, 496, 497, 498, 500, 503, 504, 505, 507, 508, 510, 511, 512, 517, 519, 520, 524, 533, 542, 551, 552, 565, 567, 584, 605, 617, 619, 624, 625, 626, 627, 628, 629, 630, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 648, 652, 653, 655, 656, 658, 660, 661, 663, 664, 665, 666, 667, 668, 669, 670, 673, 674, 675, 676, 677, 678, 679, 680, 682, 684, 685, 686, 687, 688, 689, 690
 China Sea, 12, 42, 61, 62, 87, 100, 101, 102, 149, 157, 187, 209, 218, 239, 256, 263, 267, 279, 374, 448, 470, 471, 495, 500, 505, 507, 509, 569, 604, 629, 644, 657, 669
 Chingleput, 488
 Chioggia, 175, 177
 Chios (island), 172, 442
 Chirand, 73
 Chitor, 173, 241
 Chittagong, 83, 460, 492, 512
 Chitu, 19
 Chola (kingdom/empire), 3, 76, 80, 85, 87, 103, 123, 149, 168, 176, 184, 198, 199, 214, 217, 218, 221–228, 229, 233, 236, 238, 239, 240, 250, 252, 254, 262, 335, 354, 460, 551, 605, 630, 633, 639, 676
 Chombo, 114
 Chwaka, 112, 116, 329, 335, 341, 357
 Chwezi (kingdom), 337
 Cidambaram, 223
 Cilicia, 155, 312
 Cirebon, 261, 504
 Cochín, 246, 461, 462, 479, 489, 490, 491, 546, 547, 603, 608
 Coimbatore, 490
 Cologne, 679
 Colombo, 365, 603
 Comorin (Cape), 383
 Comoros (islands), 14, 17, 91, 107, 110, 111, 113, 116, 117, 118, 119, 121, 122, 123–130, 131, 133, 135, 136, 137, 138, 139, 140, 141, 170, 210, 320, 329, 333, 339, 344, 346, 348, 351, 355, 356, 363, 366–370, 371, 374, 376, 377, 379, 389, 392, 393, 396, 409, 410, 427, 449, 535, 536, 551, 552–554, 555, 556, 557, 559, 569, 573, 590, 592, 595, 596, 597, 647, 648
 Con Dau (island), 96
 Congo, 115, 332, 337, 454, 540, 550
 Congo (river), 542
 Constantinople, 15, 64, 155, 451, 457
 Cordoba, 16, 45, 149, 286
 Cordoba (emirate), 7, 16, 17, 151
 Coromandel, 11, 13, 16, 73, 82, 135, 196, 208, 218, 226, 233, 237, 239, 240, 246, 248, 250, 269, 323, 325, 382, 383, 447, 454, 460, 461, 462, 477, 480, 484, 485, 486, 487, 488, 489, 490, 491, 492, 498, 500, 502, 506, 507, 511, 513, 540, 541, 604, 606, 608
 Correntes (Cape), 115
 Cosmin, 493
 Covadonga, 6, 17, 44
 Cranganore, 218, 245
 Crécy, 163
 Crete (island), 8, 14, 112, 155
 Crimea, 155, 293, 442, 449, 451, 516
 Ctesiphon, 63
 Cu Lao Cham (island), 96
 Cuttack, 486

- Cyprus (island), 14, 312, 315, 525
 Cyrenaica, 43
- Da Nang, 96, 256
 Da Qin, III, 197
 Dabhol, 247, 481, 506
 Dagang, 198
 Dağarga (Dağdağa), 135
 Dagon, 493
 Dahlak (island), 7, 70, 82, 304
 Dai Viêt (kingdom), 256, 261, 271, 272, 273, 341, 448, 509, 511–512
 Dakawa, 117
 Dali, 31, 195
 Dali (kingdom), 269, 288
 Daman, 605
 Damascus, 6, 17, 43, 44, 45, 48, 49, 64, 69, 230, 248, 285, 287, 296, 312, 450, 480, 515, 517, 519, 522, 528
 Damietta, 155, 301, 303, 307, 311, 312, 530
 Damot, 162
 Dandan, 24, 88, 91
 Danliumei, 257, 266
 Danmaling, 198, 257, 266, 275; *see also* Tāmbralinga
 Danube (valley), 172
 Dar-es-Salaam, 107
 Darfur, 47
 Dashi, 197, 199
 Daulatābād, 243, 315
 Dayak, 425
 Daybul, 6, 16, 59, 60, 61, 76, 81, 122, 130, 142, 216, 246, 367; *see also* Banbhore
 Deccan, 16, 51, 73, 74, 79–83, 85, 86, 94, 123, 172, 208, 216, 218, 232, 241, 243, 244, 354, 365, 447, 477, 478, 481, 482, 493, 520, 667, 669
 Deccan (sultanate), 477, 481, 633; *see* Bahmani sultanate
 Dehua, 521
 Delagoa (Bay), 541
 Delgado (Cape), 124, 336, 383
 Delhi, 221, 230, 231, 241, 242, 243, 245, 246, 365, 481
 Delhi (sultanate), 76, 77, 162, 168, 170, 173, 175, 176, 177, 215, 216, 217, 229–251, 278, 294, 295, 312, 317, 324, 327, 354, 356, 447, 456, 477, 480, 487, 494, 523, 633, 669, 671, 676
- Demak, 456, 498, 502, 503, 504
 Dembeni, 125, 126, 130, 140, 141, 366, 368, 375
 Dembeni (culture), 14, 17, 126–128, 130, 320, 647
 Dengzhou, 181
 Denmark, 15, 151
 Devagiri, 221, 232, 238, 241, 242, 243
 Dhaka, 228
 Dhara, 78
 Dhofar, 342, 402
 Dholka, 238
 Dhufar, 324
 Diamant, 115
 Dieng plateau, 97
 Dilmun, 668
 Diu, 219, 305, 443, 480, 526, 530, 604, 605, 607, 609, 676
 Diva (islands), 136
 Divuyu, 115
 Diwu, 198
 Diyār Bakr, 518
 Djaghatai (khānate), 173, 205, 290, 297
 Djoungaria, 33
 Dniepr (river), 15
 Doddiburn, 334
 Domoni, 125, 351, 352, 366, 367, 369, 552, 553
 Don (river), 169
 Dong Son, 26
 Dongola, 53
 Dubhān, 322
 Dumaguete (state), 500
 Dunhuang, 22, 25, 33, 181
 Duoheluo (To-ho-lo), 24
 Durban, 117
 Durdūr (ad-), 40
 Duria (river), 560, 562
 Dusun pottery, 89, 119, 130, 141, 353
 Dvarasamudra, 221, 224, 232, 238, 241
 Dvāravati, 16, 24, 93, 94–95, 98, 252, 255, 256
 Dwarka, 81
 Dzungaria, 16
- Edessa, 285, 529
 Efaho (river), 143, 387, 582
 Efangitse, 388, 583
 Egypt, 4, 6, 12, 13, 14, 17, 26, 43, 44, 45, 46, 47, 49, 50, 51, 52, 53, 54, 56, 57, 58, 64, 65, 67, 68, 69, 70, 81, 92, 107, 120, 124, 130, 147, 149, 153, 155, 158, 159, 162, 163, 165, 168, 169, 170, 172, 173, 174, 175, 176, 177, 197, 218, 230, 239, 240, 242, 259, 260, 283, 284, 285, 286, 289, 290, 291, 292, 293, 294, 296, 298, 299–317, 318, 320, 322, 323, 324, 325, 326, 327, 328, 329, 333, 340, 341, 352, 353, 359, 362, 363, 364, 382, 389, 435, 436, 438, 439, 440, 441, 443, 444, 446, 447, 449, 450, 451, 453, 454, 457, 461, 463, 464, 482, 491, 494, 501, 506, 514, 517, 518, 519, 522–531, 532, 533, 537, 538, 566, 590, 602, 604, 607, 617, 618, 619, 620, 622, 623, 624, 625, 626, 627, 629, 633, 639, 643, 644, 652, 653, 657, 660, 662, 664, 665, 669, 670, 671, 673, 675, 676, 677, 680, 684
 Eilat, 307
 Elam, 620
 Eldgā volcano, 12
 Elephanta, 80
 Eli, 83, 172, 248, 489
 Ellichpur, 80
 Ellora, 80, 98
 Elmina, 440
 Emilia-Romagna, 558
 Engaruka, 551
 England, 151, 152, 153, 163, 165, 167, 170, 171, 173, 174, 177, 181, 290, 436, 437, 453, 454, 457, 518, 635, 640, 665, 674, 682, 683, 685, 686, 687; *see also* Great Britain
 Enijo, 143, 388
 Eritrea, 38, 118, 124, 307, 451
 Erlitou, 624
 Ethiopia, 7, 38, 53, 65, 113, 162, 247, 302, 307, 311, 325, 441, 451, 492, 528, 537, 586, 602
 Euphrates (river), 39, 61, 64, 291, 308, 618, 666
 Euphrates (valley), 623
 Europe, 3, 4, 8, 10, 12, 15, 16, 17, 19, 20, 22, 44, 46, 48, 49, 55, 58, 61, 66, 68, 70, 147, 150–155, 156, 157, 160, 162, 163, 164–167, 169, 170, 171, 172, 173, 174, 175, 176, 177, 179, 180, 181, 186, 188, 189, 192, 196, 200, 202, 203, 211, 226, 235, 248, 286, 288, 290, 291, 293, 295, 296, 297, 306, 314, 316, 318, 341,

- 433, 434, 435–446, 447, 449, 450, 452, 453, 454, 455, 457, 467, 469, 472, 474, 475, 483, 486, 504, 509, 512, 515, 516, 517, 522, 529, 530, 558, 604, 609, 617, 623, 624, 627, 634, 635, 636, 637, 639, 641, 642, 662, 665, 668, 670, 672, 673, 674, 675, 677, 679, 680–682, 683, 684–688, 689
Europe (eastern), 15, 161, 438, 661
Europe (northern), 14, 150, 157, 436, 439, 635, 646, 679, 688
Europe (western), 7–9, 14, 15, 68, 72, 162, 173, 438, 455, 516, 664
Exeter, 165
Ezhou, 195

Fakanar, 606
Falémé (river), 173
Famen, 26
Fanantara (region), 378, 403
Fanantara (river), 403
Fanjahira, 583
Fanjahira (river), 393
Fanjahirambe, 582
Fanongoavana, 580, 581, 582
Farafangana, 395
Farama, 64
Fārs, 48, 63, 64, 70, 247, 248, 282, 283, 291, 292, 293, 295, 297, 319, 322, 515
Fatimid Empire, 13, 14, 16, 51, 53, 54, 58, 69–70, 81, 120, 149, 153, 154, 280, 285, 286, 299–306, 673, 675, 676
Faux-Cap, 425
Faza, 341
Fenoarivo, 143, 378, 568
Ferghana (valley), 6, 23, 58, 519
Fez, 51, 52, 66, 67, 316, 439, 441
Fezzan, 52
Fiekena culture, 385–387
Fihereña (river), 390
Flanders, 154, 165, 171, 436, 450, 453, 517
Florence, 163, 165, 170, 171, 173, 314, 384, 433, 436, 437, 442, 445, 451, 453, 524, 679
Foluo'an, 198, 266, 268
Fort-Dauphin, 388, 408, 409, 411, 571
Foshibulo, 88
Fossalta, 167
Foulpointe, 403

France, 64, 150, 151, 152, 154, 170, 171, 172, 173, 174, 177, 298, 436, 437, 442, 452, 454, 457, 686
Friesland, 15
Fujian, 20, 22, 34, 36, 40, 180, 184, 190, 192, 195, 196, 199, 201, 206, 209, 212, 266, 367, 452, 456, 470, 471, 472, 474, 475, 507, 508
Fukuchani, 113, 114
Fukuoka, 28
Funan, 88, 94, 97, 661
Fustāt, 26, 57, 58, 59, 69, 70, 92, 184, 260, 299, 301, 302, 309, 317, 523, 537
Fuzhou, 12, 27, 37, 180, 190, 452, 470, 471

Galle, 82, 462
Galú, 117
Gambia, 172
Ganda, 415
Gandhara, 77, 79, 83, 365, 606
Ganga Empire, 233
Gangaikonda Cholapuram, 221
Ganges (region), 73, 77
Ganges (river), 221, 227, 405, 605, 666, 667
Ganges (valley), 10, 24, 73, 77, 85, 217, 246, 626, 666
Ganpu, 209
Gansu, 21, 25, 31, 32, 185, 253, 460
Ganzhifo, 24
Gao, 52, 116, 157, 159
Garamante culture, 629
Garbey Kourou, 52
Gārūn (island), 293
Gaulla, 225
Gaur, 231, 242, 278, 492, 494
Gedi, 122, 127, 140, 335, 340, 391, 536, 549
Gedong Songo, 97
Gelu, 24
Geluoshifen, 24
Gendebelo, 451
Genoa, 32, 154, 155, 170, 171, 172, 173, 174, 175, 177, 206, 284, 286, 301, 307, 313, 436, 437, 441, 442, 453, 455, 605, 640, 660, 675, 679
Georgia, 154, 288
Germany, 150, 163, 171, 259, 436, 437, 444, 518
Gezira, 129
Ghana, 16, 159, 170
Ghana (empire/kingdom), 51, 54, 120, 157, 159, 303, 313, 545
Ghaznavid Empire, 67, 176, 216, 229, 230, 280, 281, 356
Ghazni, 216, 230, 239, 281, 287, 296
Ghent, 436
Ghōr, 229
Ghulāfiqa, 283, 309, 317
Gibraltar, 629
Giumbo, 467
Gjuvatnet (lake), 14
Goa, 216, 219, 245, 248, 251, 324, 454, 456, 478, 479, 481, 482, 492, 506, 520, 533, 552, 603, 604, 606, 608, 609
Goḍa, 278
Godāvari (river), 228, 485
Gogogogo, 389
Goguryeo/Goryeo (kingdom), 19, 36, 185, 190
Gokanna, 87
Gokomere Tunnel, 116
Golconda (sultanate), 456, 482
Gold Coast, 440, 441, 600
Golden Horde (khānate), 169, 235, 289, 297, 310, 451
Gongyi, 21
Good Hope (Cape of), 196, 355, 434, 446, 454, 457, 552, 574, 575, 602, 609
Gopātri, 73
Goreng Gareng, 101
Goryeo (kingdom), *see* Goguryeo/Goryeo (kingdom)
Gotland (island), 15
Grahi, 257, 260
Granada, 163, 453, 457
Grande Comore (island), 124, 126, 127, 140, 344, 366, 553, 573, 592, 597
Great Britain, 8, 15, 68, 688; *see also* England
Great Canal (China), 18, 26, 179, 180, 206, 209, 212, 434, 459
Great Island (Madagascar), 127, 372, 376, 378, 382, 383, 384, 396, 399, 599, 648
Great Lakes region, 110, 337, 365
Great Red Island, 554
Greece, 281, 480, 626, 641, 662, 665, 668, 679
Greenland, 15
Gresik, 278, 500, 501, 503, 507, 511

- Guangdong, 21, 36, 195, 201, 353, 452, 496, 503
Guangxi, 27, 195, 196, 367, 459
Guangzhou (Canton), 5, 12, 16, 19, 21, 24, 26, 27, 29, 31, 33, 36, 37, 38, 40, 61, 62, 63, 86, 96, 104, 118, 180, 182, 184, 185, 187, 193, 195, 209, 210, 211, 214, 262, 272, 278, 319, 452, 456, 469, 471, 507, 511, 605, 655
Guardafui (Cape), 574
Gui (river), 34
Guilin, 27, 196
Guinea, 250, 314, 433, 439, 537
Guinea (Gulf of), 439
Guinguimaro (kingdom), 555, 560, 561–563
Gujarat, 50, 73, 76, 77, 78, 79, 80, 81, 82, 94, 98, 121, 122, 157, 172, 176, 196, 198, 208, 216, 217–220, 225, 229, 231, 233, 235, 236, 238, 241, 243, 244, 246, 249, 250, 251, 268, 269, 275, 294, 295, 308, 323, 324, 325, 328, 335, 340, 353, 354, 363, 365, 379, 383, 409, 444, 447, 454, 456, 477, 478, 479, 480, 483, 487, 490, 493, 494, 506, 511, 519, 520, 521, 530, 536, 537, 540, 541, 546, 547, 548, 604, 605, 608, 609, 666, 667, 669, 676
Gujarat (sultanate), 477, 478–480, 481, 482, 485, 501, 532, 633, 673
Gulbargā, 482, 535
Gunung Wingo, 90
Gunung Wukir, 97
Gupta Empire, 11, 72, 75, 633, 644
Gurjan, 9
Gurjara-Pratihāra, 10, 13, 16, 72, 75–79, 98, 216
Gurun, 271
Gwalior, 73
Habasha (al-), 38
Hadiya, 162
Hadramawt, 113, 196, 197, 284, 317, 318, 319, 323, 324, 342, 347, 352, 370, 478, 538
Hai Van Pass, 274
Hainan (island), 24, 31, 267
Hakata, 504
Hami, 471, 516
Hamsavati, 93
Han Empire, 3, 32, 628, 629, 633
Hanaya (al-), 64
Hangzhou, 12, 18, 28, 155, 169, 179, 180, 182, 190, 191, 193, 195, 205, 206, 207, 209, 263
Hani, 52
Hanoi, 31, 33, 274
Hanyundro, 352
Hanzuwānī, 553
Harikela, 228
Harkand Sea, 40, 61
Haryana, 73, 77
Ḥasā (al-), 293, 349
Hastings, 10
Hausa country, 157
Ḥays, 533
Hebei, 26, 181, 212, 289
Hedung, 32
Heian, 28, 36, 199
Heiankyo, 35
Helgö (island), 15
Heling, 24, 35, 37, 38, 88, 98, 99, 100
Henan, 21, 174, 181, 474, 624
Herat, 35, 43, 288, 290, 485, 516, 519
Herāt, 515, 516
Hierapolis, 168
Hijāz, 42, 43, 295, 300, 309, 311, 315, 321, 327, 359, 524, 525, 530, 532, 539, 551, 597
Hili, 325, 551
Himalayas, 75, 198, 235
Hindū Kush, 46, 666
Hitam Cave, 89
Hittite kingdom, 623
Holland, 436, 445; *see also* Netherlands
Holy Roman Empire (Germanic), 150, 152, 166
Homs, 311
Honavur, 245, 248, 295, 324, 482, 485, 497, 606, 678, 680
Hongzhou, 289
Hormuz, 149, 172, 200, 205, 208, 236, 239, 240, 246, 247, 248, 280, 283, 291, 292, 293, 294, 295, 298, 317, 319, 324, 325, 326, 355, 433, 434, 442, 443, 448, 454, 457, 460, 462, 463, 465, 469, 478, 479, 480, 481, 485, 487, 489, 490, 492, 513, 519–520, 524, 551, 569, 603, 604, 607, 608, 609, 676, 678, 679
Hormuz (Strait of), 61, 628
Horn of Africa, 7, 123, 162, 197, 307, 316, 351, 365, 451, 533, 623, 628, 629
Hova, 614
Hoysala (kingdom/empire), 220, 221, 224, 228, 232, 233, 238, 241, 324, 483
Hsien, 274
Huai (river), 190
Huangmazhu (island), 198
Huangzhou, 87
Hubei, 174, 195
Huizhou, 452, 475
Hujariyyah, 533
Hunan, 180, 184, 319
Hungary, 16, 151, 155, 163, 175, 288, 443, 449, 516
Husuni Ndogo, 354
Huzhou, 213
Hyderabad, 80, 251
Iban, 424, 425
Iberian peninsula, 7, 17, 44, 45, 451, 454
Ibo (island), 364
Iceland, 12, 15
Ifat, 162, 316, 323, 451
Ife, 52, 158, 440
Ifriqiya, 13, 67
Igbo-Ukwu, 52, 116
Iharambazaha, *see* Vohemar/Vohemary
Iharaña, *see* Vohemar/Vohemary
Ikii (island), 28
Ikongo (region), 405, 413, 419, 420, 421, 424, 566, 578
Ikopa (river), 413
Ilkhānid Empire, 161, 162, 169, 170, 173, 290–296, 311, 312, 441, 515, 519, 633, 644, 668
Imamo, 582
Imerimanjaka, 587
Imerina, 125, 372, 386, 387, 398, 399, 402, 404, 407, 411, 412, 413, 414, 417, 419, 420, 421, 425, 426, 428, 429, 457, 559, 561, 568, 573, 578, 580, 581, 582, 586, 587, 591, 595, 648, 650
Inca Empire, 455
India, 3, 5, 6, 10, 11, 13, 16, 17, 22, 23, 24, 25, 26, 27, 28, 29, 30, 34, 35, 37, 38, 39, 40, 44, 47, 49, 50, 57, 58, 59, 60, 61, 62, 63, 64–65, 68, 70, 71–86, 88, 89, 90, 91, 92,

- 93, 94, 97, 98, 102, 103, 107, 112, 114, 117, 118, 119, 120, 122, 123, 124, 126, 129, 130, 133, 135, 136, 140, 141, 142, 147, 149, 150, 153, 156, 157, 159, 162, 165, 166, 168, 170, 172, 173, 174, 175, 176, 179, 181, 184, 190, 196, 198, 205, 207, 208, 209, 210, 215, 216–251, 253, 254, 255, 257, 258, 261, 263, 264, 266, 267, 268, 271, 275, 280, 281, 283, 289, 291, 292, 293, 295, 297, 301, 302, 303, 304, 306, 309, 311, 312, 314, 315, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 328, 329, 332, 333, 335, 338, 339, 340, 341, 344, 353, 354, 355, 356, 363, 364, 365, 367, 368, 370, 371, 375, 380, 381, 382, 396, 397, 400, 402, 403, 404, 406, 408, 410, 414, 423, 424, 425, 426, 433, 441, 442, 443, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 463, 465, 467, 471, 474, 477–495, 497, 498, 501, 503, 505, 506, 508, 511, 512, 513, 515, 516, 517, 519, 520, 521, 522, 524, 526, 528, 529, 530, 531, 532, 534, 535, 537, 540, 541, 542, 547, 549, 551, 560, 569, 574, 579, 589, 591, 594, 595, 597, 599, 600, 601, 603, 604, 605, 606, 607, 608, 609, 618, 623, 625, 626, 627, 628, 630, 633, 634, 639, 642, 643, 644, 645, 647, 653, 654, 656, 664, 666, 668, 669, 670, 671, 672, 676, 677, 678, 679, 680, 684, 685, 686, 688, 689
- Indochina, 96, 198, 270, 272, 273, 278, 400, 565
- Indonesia, 25, 37, 38, 81, 88, 91, 96, 97, 101, 133, 134, 198, 201, 208, 211, 250, 268, 271, 275, 276, 277, 295, 368, 372, 384, 386, 395, 404, 408, 418, 419, 422, 427, 429, 487, 500, 556, 567, 575, 576, 588, 594, 649, 685
- Indragiri, 508
- Indrapura, 256
- Indus (region), 620, 628
- Indus (river), 81, 122, 176, 618, 620, 666
- Indus (valley), 6, 68, 77, 232, 617
- Ingombe Ilede, 114, 361, 540, 541
- Inhacoe, 540
- Inhambane, 115
- insular Southeast Asia, 90, 98, 104, 162, 175, 198, 199, 250, 252, 257, 263, 265, 267, 268, 269, 271, 273, 275, 372, 395, 398, 400, 406, 408, 414, 415, 426, 427, 452, 473, 482, 488, 494, 496–509, 510, 511, 514, 566, 573, 576, 579, 591, 599, 600, 656, 663, 666, 670
- Insulindia, 11, 61, 104, 169, 415, 427, 520
- Intan, 261
- Ionian Sea, 155
- Iran, 5, 11, 16, 18, 21, 24, 29, 30, 44, 45, 46, 47, 48, 49, 52, 59, 61, 68, 69, 70, 79, 82, 87, 111, 114, 116, 170, 173, 177, 197, 199, 205, 206, 209, 215, 243, 246, 247, 248, 249, 254, 259, 280, 282, 285, 287, 289, 290–297, 301, 305, 312, 317, 319, 320, 346, 376, 408, 439, 446, 450, 452, 471, 474, 480, 481, 482, 485, 515, 516, 518, 519, 520, 537, 558, 560, 577, 599, 605, 628, 630, 647, 653, 654, 664, 671, 688, *see also* Persia
- Iraq, 48, 49, 52, 60, 62, 64, 67, 68, 69, 87, 114, 130, 161, 177, 234, 248, 249, 280, 282, 285, 289, 290, 291, 292, 294, 297, 301, 305, 308, 310, 317, 319, 321, 332, 359, 367, 374, 446, 515, 523, 676
- Ireland, 15
- Irian Jaya, 278
- Irodo, 17, 106, 128, 129, 138, 139, 141, 376, 377, 378, 387, 566
- Irrawaddy (river), 488, 512
- Isalo, 390, 584
- Isamu Pati, 334
- Işfahan, 209, 280, 283, 284, 295, 297, 519
- Ishanapura, 95
- Islamic Empire. *see* Muslim Empire
- Issyk Kul (lake), 148, 174, 288, 433, 472
- Istanbul, 450, 518
- Italy, 8, 9, 14, 15, 54, 57, 150, 151, 152, 153, 154, 155, 164, 165, 166, 167, 170, 171, 172, 173, 177, 191, 200, 208, 284, 287, 291, 293, 314, 436, 437, 439, 442, 444, 450, 452, 457, 480, 523, 655, 663, 679, 680, 688
- Itampolo, 569
- Itasy (lake), 143, 394
- Itasy (region), 143, 373, 385, 395, 578
- Itil, 64
- Ivato, 591
- Ivondro (river), 403
- Izmir, 450
- Jaffa, 285
- Jakarta, 261
- Jambi, 35, 88, 91, 92, 97, 103, 196, 227, 259, 262, 266, 269, 270, 271, 277, 380, 504
- Janjirā, 609
- Japan, 5, 22, 26, 27, 28, 30, 35, 36, 40, 62, 156, 161, 162, 174, 176, 184, 185, 186, 192, 195, 199, 200, 201, 206, 207, 214, 433, 434, 435, 446, 452, 459, 461, 463, 468, 469, 470, 471, 473, 504, 508, 512, 531, 644, 676, 680, 683, 689
- Jar, 64
- Jaunpur, 176, 244, 365, 461
- Java (island), 11, 16, 24, 27, 31, 35, 37, 63, 88, 89, 90, 91, 93, 95, 96, 97–105, 132, 133, 135, 136, 137, 162, 169, 170, 176, 184, 195, 196, 198, 199, 201, 207, 209, 247, 251, 252, 256, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 270, 271, 272, 273, 275–279, 356, 377, 380, 386, 402, 408, 410, 411, 417, 420, 421, 423, 424, 428, 448, 452, 456, 458, 461, 462, 463, 470, 471, 496, 497, 498, 500, 501, 502, 503, 504, 507, 508, 511, 513, 574, 575, 576, 579, 592, 609, 644, 657, 660, 663, 665, 676
- Java Sea, 261, 264, 276, 575, 647
- Jāvaga, 63, 368, 381
- Jeddah, 59, 64, 65, 284, 309, 316, 319, 327, 447, 463, 519, 524, 525, 526, 528, 530, 531, 532, 555, 573, 607
- Jenderam Hilir, 260
- Jenné, 52, 158
- Jenne-Jeno, 52
- Jerusalem, 280, 285, 306, 307, 310, 317, 364, 441
- Ji'an, 190
- Jiangnan, 213, 536
- Jiangsu, 181
- Jiangxi, 180, 190, 192
- Jianyang, 190

- Jiaoluxi, 257
 Jiaozhi, 21
 Jiaozhou, 193
 Jiaying, 213
 Jiecha, 88
 Jilān, 480, 482, 671
 Jin Empire, 176, 190, 195, 202
 Jingdezhen, 320
 Jingzhi, 26
 Jizhou, 180
 Johore, 507, 609
 Jolo (island), 28, 498
 Jolof kingdom, 158, 638
 Jongwe, 342
 Jorjan Sea, 64
 Juani (island), 113
 Jubba (river), 106
 Julah, 102, 104
 Julfar, 363
 Junagadh, 236
 Jungomar (Bay of), 562
 Jurfattan, 248
 Justa, 140

 K2, 334, 337, 375; *see also*
 Bambandyanalo
 Kabengo, 337
 Kabul, 44, 68, 494
 Kaḍāram, 226, 227, 254, 262
 Kahuripan, 260
 Kaifeng, 40, 179, 180, 181, 182, 183,
 190, 201
 Kairouan, 43, 50, 51, 52, 64, 67,
 159, 656
 Kajengwa, 356
 Kākātiya (kingdom), 231, 235,
 241, 244
 Kaladi, 103
 Kalāh, 38, 39, 61, 63, 91, 92,
 103, 254
 Kalanjara, 78
 Kalapa, 503
 Kalasan, 97, 98
 Kalimantan (island), 28, 88, 89, 91,
 271, 277, 408, 416, 419, 425, 426,
 445, 504, 507, 576, 577, 588,
 609, 647
 Kalinga, 79, 258
 Kalirungan, 103
 Kalundu, 114
 Kalyāna, 80, 220–221, 224, 228, 232
 Kamakura (shogunate), 156, 176,
 199, 207, 214
 Kamalagyan, 513

 Kambang Sri, 103
 Kambeng Unglen, 90
 Kamboja, 83
 Kampar, 508
 Kanara, 486
 Kanauj, 72, 75, 76, 78, 80, 83,
 216, 229
 Kancana, 99
 Kāñchīpuram, 24, 84–86, 226, 234
 Kanem, 47, 52, 54, 157, 306
 Kanem-Bornu, 159
 Kannada, 487
 Kaole, 107, 113, 335, 341, 346,
 351, 559
 Karā, 242
 Karakorum, 161, 289, 293
 Karang Brahi, 89
 Karnataka, 80, 85, 217, 222, 224,
 225, 226, 237, 278
 Kāshān, 282, 519
 Kashgar, 23
 Kashmir, 75, 76, 77, 78, 198,
 237, 244
 Kathiawar, 479
 Katoto, 114
 Katul al-Kisrawi canal, 290
 Kauchi, 508
 Kausala, 225
 Kaushāmbi, 73
 Kauṭhāra, 96, 256
 Kāverī (river), 84, 221, 225,
 228, 486
 Kāverīpaṭṭinam, 85
 Kavitaha (lake), 140, 143, 373
 Kawlām, 210
 Kāyal, 236, 240, 246, 462, 486, 489
 Kazan, 10, 235
 Kedah, 61, 88, 92, 93, 227, 228, 254,
 259, 262, 480, 605
 Keḍiri, 149, 176, 255, 264, 271, 272,
 420, 501
 Kedukan Bukit, 88, 420, 589
 Kelagyan, 260
 Kelang, 61
 Kelantan, 266, 275, 462
 Kelantan (river), 260
 Keling, 500
 Kelurak, 98
 Kemaman, 260
 Keneh, 531
 Kent, 8
 Kenya, 106, 107, 114, 117, 119, 122,
 124, 129, 133, 196, 348, 363,
 538, 598

 Kerala, 73, 80, 82, 87, 172, 222, 236,
 246, 328, 477, 483, 489, 670
 Kerbelā, 6, 17, 43
 Kerman, 64, 292
 Kgaswe, 334
 Khajuraho, 78, 229, 233
 Khalat, 199
 Khamboja, 225
 Khami, 540
 Khamlidj, 64
 Khazaria, 9, 10, 16, 44, 54, 55,
 155, 667
 Khitan, 13, 25, 61, 160, 288,
 643
 Khmer (state/kingdom/empire),
 16, 95, 136, 252, 255, 256, 257,
 269, 274, 379, 380, 509; *see also*
 Cambodia
 Khorasan, 13, 17, 44, 46, 48, 59, 61,
 66, 67, 160, 177, 216, 229, 280,
 282, 288, 289, 308, 481, 482,
 516, 519
 Khotan, 23, 25, 33
 Khuan Lukpad, 92
 Khung, 294
 Khūzistān, 48, 49
 Khwārezm, 9, 10, 25, 44, 46, 59,
 67, 160, 177, 201, 282, 287, 288,
 289, 291, 296
 Kibiro, 365
 Kiḍāram, 228
 Kiel, 439
 Kiev, 15, 64
 Kilakkarai, 250, 489
 Kilepwa, 122, 129
 Kilifi, 346
 Kilwa, 109, 110, 111, 112, 115, 121,
 122, 124, 126, 127, 128, 129, 131,
 139, 140, 141, 142, 157, 170, 175,
 177, 317, 319, 329, 330, 331, 335,
 339, 340, 341, 342, 343, 344, 345,
 346, 347, 348, 350, 351, 352, 354,
 355, 356–366, 368, 369, 371, 375,
 381, 382, 409, 449, 456, 457, 462,
 467, 535, 536, 537, 538, 539, 541,
 546, 547, 548, 551, 552, 553, 560,
 586, 603, 607, 608, 610, 611, 612,
 654, 658, 659, 664, 678
 Kilwa (island), 330
 Kilwa Kisiwani, 341, 536
 Kingany, 376, 456, 557, 558, 559,
 566, 570, 611, 615
 Kinkony (lake), 373
 Kioni, 346

- Kiradu, 235
 Kirman, 283, 319
 Kisar, 415
 Kish, 283
 Kisimani Mafia, 342, 345, 351
 Kissi, 52, 54, 116
 Kitau, 538
 Kiungamwini, 119
 Kivinja, 107
 Kiwangwa, 107, 113, 114
 Kizimkazi, 339, 341, 342, 346
 Ko Kho Khao, 92, 93
 Kök Turk Empire, 10, 16
 Kolar, 241
 Kollam, 82, 172
 Kolzum, 64, 65
 Konarak, 233
 Kongo (kingdom), 158, 337, 360, 440, 454, 543, 638, 652, 654, 659, 662
 Konkan, 73, 81, 82, 216, 217, 218, 219, 220, 245, 247, 383
 Konya, 282
 Korea, 5, 19, 22, 26, 27, 28, 29, 31, 36, 40, 185, 189, 190, 199, 201, 203, 204, 212, 214, 461, 463, 470, 504
 Korkai, 236
 Kota Blater, 91
 Kota Cina, 92, 133, 259, 263, 375
 Kota Kapur, 89, 98
 Kottapatnam, 511
 Kōṭṭayam, 485
 Kotte, 492
 Kougha, 158
 Koungou, 125, 127, 139
 Kovalam, 236
 Koyama, 558
 Kra, 61, 86, 91, 95, 227, 252, 253, 259
 Krabi, 260
 Krishna (river), 84, 228, 245, 485
 Ku Bua, 94
 Kuala Berang, 198, 266, 269
 Kuchā, 23
 Kūfa, 31, 45, 46, 64, 69, 111, 350
 Kūlam, 40, 60, 82, 83, 135, 221, 236, 240, 241, 247, 248, 324, 325, 467, 486, 491, 609, 678
 Kūlam-Malay, 40, 82, 347, 381
 Kumajulo, 114, 140
 Kumbi Saleh, 51, 159
 Kundrang, 61
 Kunduchi, 113, 536
 Kunlun *cengki*, 333
 Kunnatur, 488
 Kuria-Muria, 333
 Kushan Empire, 164, 224, 630, 633, 664
 Kuta Kareueng, 498
 Kutch, 479
 Kutei, 91
 Kuṭi, 103
 Kuwae (island), 435, 646
 Kwa Mgogo, 121
 KwaGandaganda, 117
 Kyoto, 28, 35, 156, 200, 470
 Kyrgyzstan, 3
 Kyushu (island), 28
 Laccadive (islands), 60, 82, 136, 462, 489
 Laem Pho, 92, 93
 Laguna, 104
 Lahore, 216, 230, 231, 232, 244, 356
 Lahori Bandar, 81
 Lakaria, 568
 Lakhnauti, 231, 242, 492
 Lala, 225
 Lambri, 198, 266, 269, 462
 Lampung, 89, 92
 Lamu (archipelago), 11, 17, 109, 111, 113, 114, 118, 119, 124, 341, 345, 348, 349, 351, 354, 357, 358, 367, 538, 556, 608
 Lamu (city), 111, 349, 352, 358, 538, 550, 551
 Lāmuri, 196, 227, 269, 497
 Lang Na, 509
 Langabālūs, 40
 Langany, 456, 555, 556, 557, 558, 560, 561, 562, 570, 572, 573, 599, 612, 614, 648
 Langkasuka, 19, 92, 198, 227, 266, 267, 275
 Lanivato, 139
 Lanjūya, 342
 Lan-na, 270, 510
 Larwi Sea, 61, 133
 Las'ā, 318, 462
 Lavo, 95, 256, 260
 Layrāna, 133, 381
 Legnano, 154
 Leopard's Kopje, 115, 334
 Leopard's Kopje culture, 334
 Lepanto, 449
 Leran, 104
 Levant, 47, 114, 149, 159, 165, 171, 172, 175, 236, 259, 298, 300, 301, 307, 443, 446, 447, 451, 517, 519, 520, 526, 528, 597, 607, 620, 625, 626, 629, 639
 Leyte, 265
 Li (river), 34
 Liao Empire, 176, 185, 190, 202
 Libya, 6, 17, 52
 Liège, 436
 Ligonha (river), 393
 Ligor, 92, 227
 Limpopo (region), 335, 338, 376, 543
 Limpopo (river), 124, 334, 338, 361, 392, 539
 Limpopo (valley), 116, 157, 334, 336, 338, 372, 375, 544, 546, 653
 Limudra, 121
 Lin-an, 180
 Lindi, 124
 Lingnan, 20, 33, 190, 624, 682
 Lingqu canal, 34
 Ling-shan, 199, 210
 Lingyasijia, *see* Langkasuka
 Linta (river), 389
 Lintakan, 99
 Lintamandanimeriñe, 389
 Linyi, 19, 24, 38, 96
 Lisbon, 433, 547, 550, 602, 603, 604
 Liuqiu, 19
 Loango kingdom, 542
 Lob Nor, 435
 Lobi, 173
 Lobu Tua, 228, 257, 258, 259
 Locha, 19
 Lochac, *see* Langkasuka
 Lodi, 442
 Lodi (empire), 478, 480
 Lohavohitra, 396, 581, 582
 Loire (valley), 15
 Lokoho (valley), 398
 Lomani (river), 588
 Lombardy, 155, 436
 Lombok (island), 277
 London, 165, 688
 Long Bien, 96
 Longquan, 190
 Longyou, 31
 Lopburi, 94, 95, 252, 260, 267, 270, 510
 Lübeck, 165, 679
 Lucca, 163, 165, 437
 Luchuan, 468
 Lulangany, 570, 611, 612, 613

- Lumbo, 127, 364
 Luo, 18
 Luoyang, 13, 18, 21, 22, 26, 36
 Lurio (river), 127, 346
 Lusitu (river), 540
 Luziwa, 538
 Luzon (island), 28, 101, 104, 265, 278, 500, 507
 Lycia, 43
 Lydia, 626
 Lyon, 167, 437, 442
 Ma'bar, 244, 293
 Mabveni, 116
 Macao, 604
 Macedonia, 627, 640
 Madagascar, 14, 17, 49, 91, 107, 108, 110, 112, 117, 118, 121, 123, 124, 125, 126, 127, 128, 129, 130, 131, 133, 134, 135, 136, 137, 138–143, 162, 170, 177, 196, 210, 302, 320, 329, 333, 335, 336, 338, 339, 340, 341, 342, 348, 349, 350, 355, 356, 358, 363, 364, 366, 367, 368, 369, 371–429, 449, 457, 505, 535, 536, 537, 547, 550, 551, 552, 553, 554, 555–601, 608, 610–616, 645–650, 652, 656, 662
 Madayi, 83, 210, 248
 Madeira, 439
 Madhya Pradesh, 73, 76
 Madirokely, 141, 376
 Madjeweni, 573
 Madras, 605
 Madura, 271
 Madurai, 75, 82, 173, 232, 241, 244, 247, 248, 292
 Mafelefo, 389
 Mafia (island), 110, 113, 119, 129, 335, 342, 345, 348, 350, 355, 356, 360, 465
 Magadha, 23, 75, 97, 225
 Maghreb, 16, 51, 54, 69, 149, 151, 157, 165, 170, 247, 285, 314, *see also* Africa (North)
 Maghrib (al-), 317
 Mahābalipuram, 85
 Mahafaly, 143, 389, 413, 415
 Mahajamba (Bay of), 386, 561, 570, 611
 Mahajamba (river), 138, 557, 558, 560
 Mahajamba (valley), 560
 Mahajanga, 401
 Mahanara, 377, 568
 Mahanoro, 590
 Maharashtra, 74, 79, 80, 233
 Mahastangarh, 86
 Mahazoma, 559
 Mahd ad-Dahab, 51
 Mahdiyya (al-), 159
 Mahilaka, 17, 125, 128, 129, 138, 139, 140, 141, 162, 177, 335, 336, 338, 355, 367, 371, 373, 374, 375, 376, 378, 380, 381, 389, 456, 555, 557, 561, 647, 648
 Mahodayapuram, 240
 Mailapur, 486
 Maintirano, 570
 Maintirano (river), 390
 Majikavu, 125, 130, 139
 Maka, 392–393, 596; *see also* Mecca
 Makamby, 560
 Makassar, 250, 500, 507
 Makatuni, 535
 Makgadikgadi, 117
 Makrān, 283, 294, 318, 319, 481
 Makunduchi, 355
 Makuria (state/kingdom), 47, 53, 306, 310
 Makuru, 116
 Malabar, 13, 37, 39, 62, 79, 81, 82, 83, 85, 157, 195, 196, 198, 208, 218, 219, 220, 224, 229, 235, 236, 237, 240, 241, 245, 247, 248, 254, 266, 268, 269, 302, 303, 324, 325, 347, 354, 410, 443, 461, 462, 463, 479, 485, 486, 487, 489, 497, 506, 508, 531, 551, 602, 603, 604, 605, 608
 Malacca, 210, 246, 275, 277, 279, 295, 374, 433, 435, 442, 444, 447, 448, 449, 452, 454, 456, 460, 461, 462, 463, 464, 469, 470, 471, 479, 480, 486, 487, 488, 489, 490, 491, 492, 494, 495, 496, 497, 498, 500, 503, 504, 505, 506, 508, 510, 511, 512, 513, 519, 520, 521, 533, 537, 552, 567, 574, 603, 604, 606, 609, 644, 645, 662, 664, 665, 676, 678, 679
 Malacca (Straits of), 62, 91, 136, 196, 218, 226, 263, 503, 605, 644, 679
 Malacca (sultanate), 277, 497, 498, 504–509
 Malagasy culture, 138–144, 371–430, 555–601
 Malang, 97, 276
 Malawi, 393, 586
 Malawini, 571
 Malay (culture), 96, 104, 448
 Malay (peninsula), 24, 61, 96, 98, 103, 226, 227, 254, 257, 259, 263, 277, 278, 395, 497, 512, 514, 552, 665
 Malay (Strait), 64
 Malaysia, 62, 82, 98, 114, 187, 225, 250, 258, 271, 588, 589, 609
 Malāyu, 256, 262, 277, 380, *see also* Melayu
 Maldives (islands), 40, 54, 60, 61, 62, 73, 87, 91, 122, 135, 136, 149, 221, 237, 244, 246, 247, 250, 325, 355, 363, 371, 383, 402, 403, 411, 462, 463, 465, 467, 489, 491, 494, 503, 531, 536, 570, 573, 574, 669
 Malé, 463, 574
 Mali, 116, 158, 159, 170, 173, 313, 314, 360, 440, 522, 530, 545
 Malindi, 38, 122, 127, 196, 333, 342, 348, 364, 434, 449, 454, 456, 461, 462, 463, 465, 478, 480, 493, 536, 537, 538, 539, 541, 544, 546, 548, 549, 550, 552, 558, 559, 560, 584, 597, 602, 603, 609, 612, 613, 614
 Malinke (kingdoms), 158
 Maliovola, 143, 386, 387
 Malkhed, 80
 Malumba, 116, 338
 Malwa, 73, 78, 83, 176, 198, 216, 217, 219, 229, 244, 485, 492
 Mamagwe, 115
 Māmallapuram, 85, 86
 Mamluk Empire, 162, 177, 309–317, 501, 517, 528, 673, 675
 Manadeley, 451
 Manakara, 378, 571
 Manambolo (river), 584, 587
 Manambondro (river), 588
 Manambovo (river), 388, 389
 Mananara (region), 378
 Mananara (river), 142, 568
 Manandona (valley), 580
 Manandra (river), 407
 Manandriana (river), 588
 Mananjary, 142, 378, 388, 410, 411, 413
 Mananjary, Mananzary (river), 378, 413
 Mananjung, 260

- Mananzari (river), 413
 Manchuria, 18, 36, 434, 460
 Manda, 110, 111, 112, 113, 114, 118, 119, 120, 121, 126, 127, 128, 129, 130, 131, 140, 141, 142, 339, 341, 344, 348, 349, 350, 354, 375, 377, 536, 538, 539
 Mandan-dRamananga, 389
 Mandrare (river), 569
 Mandu, 365
 Mangabe, 580
 Mangalore, 172, 219, 220, 245, 247, 304, 305, 324, 325, 404, 486
 Mangaroro, 590
 Mangoro (river), 387, 403, 580
 Manica, 544, 546, 563, 607
 Manikpatna, 86, 233
 Manila, 265, 374, 470, 498, 507
 Mankār, 569
 Mankir (el-), 72
 Mannar (Gulf of), 221
 Mansūra, 80, 285, 294
 Mantai, 82, 87
 Mantyāsih, 97
 Manūra, 570
 Manyakheta, 80
 Mānyakheta, 72
 Manyikeni, 338
 Manzalāji, 570
 Manzi, 236
 Manzikert, 154, 280
 Maore, 126, 127, 366
 Mapela, 335, 336
 Mapungubwe (city), 116, 334, 335, 336, 337, 375, 543
 Mapungubwe (state/kingdom), 157, 335, 336, 337, 338, 360, 543, 545, 546
 Maqdišūh, 322
 Marāgha, 168, 286, 290, 296
 Marambitsy (Bay of), 393
 Marinduque (island), 265
 Marka, 110, 111, 349
 Maroaloke, 389
 Maroantsetra, 412
 Marolaoke, 388
 Marovahiny, 387
 Marovoay, 424
 Marqab, 311
 Marrakech, 285, 441
 Marseille, 450
 Martaban, 272, 353, 448, 488, 493, 494, 504, 512, 521
 Mascarene (islands), 571, 610
 Mashed, 443
 Masheumhlope, 116
 Masikoro, 422, 424
 Masoala (Cape), 411
 Massalage, *see* Manzalāji
 Massawa, 531
 Masuguru, 107, 113
 Masulipatnam, 251, 609
 Matacassi, 384, 416
 Mataram (state/kingdom), 16, 98, 99, 100, 101, 102, 149, 227, 251, 420
 Matatāña (region), 413, 577, 597, 610
 Matatāña (river), 143, 387, 393, 410, 556, 568, 571, 574, 576, 589, 610, 613, 614
 Matatāña (valley), 387, 404, 567, 568, 569, 582, 590, 591, 592, 649
 Mateke hills, 338
 Matlapaneng, 115
 Mauritania, 51, 440
 Mauryan Empire, 628, 672
 Māwarā' an-Nahr, 67
 Mayotte (island), 17, 111, 125, 126, 127, 139, 140, 141, 350, 352, 358, 366, 370, 393, 403, 407, 408, 409, 553, 590
 Mazalagem, 560, 561, 563, 570, 584, 587, 614, 615
 Mazalagem Nova, 560, 570
 Mazoe (valley), 115
 Mazofe, 544
 Mbagazewa, 336, 338
 Mbashile, 126, 129, 130
 Mbeni, 125, 126, 140, 553
 Mbude, 370
 Mdang, 99, 104
 Mduuni, 353
 Mecca, 42, 47, 51, 60, 67, 68, 157, 249, 283, 306, 308, 309, 311, 312, 313, 314, 326, 327, 348, 359, 392, 404, 405, 440, 461, 463, 480, 482, 490, 492, 493, 519, 522, 523, 524, 527, 532, 535, 551, 559, 589, 592, 596, 670, 671
 Medina, 6, 17, 42, 43, 249, 309, 311, 312, 531, 551, 591
 Medina del Campo, 442
 Mediterranean Sea, 9, 17, 158, 164, 175, 280, 308, 605, 623, 626, 627
 Mekong (region), 269, 624
 Mekong (river), 95, 273
 Mekong (valley), 509
 Melanesia, 37, 598
 Melayu, 24, 88, 269; *see also* Malāyu
 Melayu Sea, 63
 Mema, 54
 Menam (river), 269, 270, 274
 Menarandra (river), 388, 390
 Menarandra (valley), 143
 Merapi (vulcano), 101
 Mergui (archipelago), 250, 253
 Merina culture, 414, 421, 426
 Merina state, *see* Imerina
 Meroe kingdom, 627
 Meru (mount), 420
 Merv, 35, 43, 44, 49, 67, 281, 288
 Mesopotamia, 11, 12, 13, 17, 42, 43, 44, 47, 48, 57, 68, 69, 113, 159, 162, 170, 286, 446, 450, 461, 515, 617, 618, 619, 620, 622, 624, 626, 630, 636, 639, 651, 668, 672
 Mexico, 455, 457
 Mgombani, 107, 114
 Middle East, *see* Levant
 Milan, 163, 171, 436, 442, 603, 679
 Min (kingdom), 36, 40
 Minangkabau, 259, 271, 395, 498, 508, 513
 Minas Gerais, 685
 Mindanao (island), 28, 102, 104, 143, 265, 498
 Mindoro (island), 28
 Ming Empire, 212–215, 274, 277, 434–435, 448, 452, 458–476, 493, 496, 510, 511, 512, 516, 604, 633, 667, 674
 Mingzhou, 12, 182, 190, 214
 Minzhou, 180
 Mirbāt, 284, 318, 320
 Mirontsi, 552
 Misasa, 107, 121
 Mitsinjo (lake), 373
 Mitsio (archipelago), 411
 Mittani, 623
 Mizhou, 184
 Mjini-Dembeni, 366
 Mkadini, 113
 Mkia wa Ngombe, 339
 Mkokotoni, 113, 342, 354
 Mmadipudi, 115
 Moero (lake), 340, 393
 Mogadishu, 110, 131, 170, 295, 319, 323, 328, 339, 342, 344, 347, 349, 351, 352, 353, 355, 359, 363, 364, 371, 381, 382, 383, 384, 394, 449,

- 451, 456, 457, 462, 463, 467, 533, 537, 539, 546, 547, 551, 552, 572, 613, 656, 678
- Moheli, *III*, 124, 126, 127, 129, 130, 139, 367, 388, 553, 554; *see also* Mwali
- Mojomby (island), 392
- Mojopahit, 278
- Mojopahit (kingdom), 169, 170, 175, 176, 211, 251, 272, 275–279, 372, 406, 408, 420, 428, 448, 456, 462, 495, 496, 501, 504, 511, 605, 644, 661, 664, 678
- Mokala, 387
- Mola, 24
- Moluccas, 89, 91, 101, 102, 208, 246, 261, 265, 271, 273, 276, 278, 279, 445, 454, 494, 498, 500, 501, 502, 507, 628, 644, 666
- Moluoyu, 24
- Mombasa, 107, *III*, 340, 342, 344, 348, 352, 357, 358, 359, 363, 364, 449, 457, 465, 478, 480, 537, 539, 541, 548, 549, 550, 552, 554, 566, 586, 603, 607, 611, 612, 613, 678
- Mōn (states/kingdoms), 93, 103, 252, 258, 269, 272
- Mongol Empire, 159–164, 167–168, 176, 177, 203–212, 231, 232, 244, 287–298, 523, 634, 641, 660, 664, 677
- Mongolia, 3, 31, 156, 160, 185, 287, 289, 459
- Monomotapa, 415, 546, 604; *see also* Mutapa
- Montpellier, 167
- Moramanga, 580
- Moravia (Great), 14
- Moritsane, 334
- Morocco, 12, 51, 52, 58, 64, 67, 68, 151, 165, 168, 172, 303, 313, 318, 408, 439, 456
- Moroni, 592
- Moscow, 293, 297, 450, 451
- Mossi (kingdom), 173
- Mosul, 285, 286
- Motupalli, 219, 233
- Moutoua, 553
- Mozambique, *II*, 17, 107, 109, *III*, 115, 124, 127, 131, 134, 135, 140, 332, 336, 337, 339, 346, 355, 357, 358, 364, 392, 393, 397, 408, 465, 542, 553, 559, 584, 586, 588, 597, 610, 612, 614, 615
- Mozambique (channel), 383, 552, 584, 610
- Mozambique (island), 127, 364, 392, 608
- Mpiji, 107, 113
- Mrima, Wamizi, 124
- Mro Dewa, 119, 126, 130, 367
- Mrohaung, 448, 512
- Mtambwe Mkuu, 109, 127, 339, 345, 348, 354
- Mteza, 114
- Mtwapa, 122, 133
- Muang Fa Daet, 95
- Muang Phra Rot, 94
- Muang Sema, 95
- Muang Sri Mahosot, 94
- Mughal Empire, 454, 456, 494, 517, 633
- Mulāli, 553
- Multān, 81, 120, 229, 232, 244, 245, 246
- Mun (valley), 95
- Munsa, 337, 341
- Murbāt, 196, 319
- Muromachi (shogunate), 214
- Muscat, 40, 62, 82, 294, 519, 603
- Muscovy, 517
- Musi (river), 88, 89, 90
- Muslim Empire, 8, 11, 17, 31, 41, 43–71, 117, 149, 261, 279, 280, 633, 639
- Mutapa (state), 332, 449, 540, 541, 542, 543, 544, 545, 548, 563
- Mwali, 126, 366; *see also* Moheli
- Mwali Djini, 130
- Mwali Mdjini, 126, 129, 130, 139, 367
- Mwana, 335, 344
- Mwani, 397
- Mwenezi Farm, 116, 338
- My Son, 96
- Mylapore, 86
- Myriokephalon, 155
- Mysore, 241
- Mzebib, 527
- Nāgapattinam, 86, 223, 226, 228, 244, 250, 487, 540
- Nahwran canal, 47, 290
- Nakhon Pathom, 94, 95
- Nakhon Si Thammarat, 92, 93, 227, 240, 254, 257, 258, 259, 260, 267
- Nālandā, 84, 89, 100, 231
- Namela (river), 570
- Nan Han (kingdom), 36
- Nanjing, 212, 456, 458, 459, 461, 464, 465, 467, 471
- Nanyang, 470
- Nanzhao, 25, 31, 33, 95, 176, 253
- Nanzhao (kingdom), 30, 33, 253, 269, 669
- Naples, 8, 166, 436
- Nara, 27, 28, 30, 35
- Narbonnais, 43
- Narinda (Bay of), 561
- Narmada (river), 75, 232
- Nasīm, 571
- Natal, 110, 131, 541
- Ndondondwane, 131
- Ndzuan, 367, 553
- Negros (island), 418, 500
- Nellore, 485
- Nepal, 225
- Netherlands, 453, 506, 674, 675, 681, 682, 684, 686, *see also* Holland
- New Guinea, 598, 669
- Newfoundland, 15
- Ngazija, 124, 125, 126, 366, 369, 553
- Nha Trang, 96
- Nicopolis, 175
- Niger, 52, 159, 173
- Niger (river), 52, 116, 173, 440
- Niger (valley), 52, 158, 440, 441
- Nigeria, 52, 596
- Nile (delta region), 48, 624
- Nile (river), 4, 12, 50, 52, 69, 70, 124, 147, 149, 157, 160, 173, 244, 299, 306, 307, 310, 341, 379, 380, 449, 618, 646
- Nile (valley), 67, 323
- Nîmes, 565
- Ningbo, 180, 182, 193, 209, 211, 452, 470, 471
- Nīshāpūr, 10, 26, *III*, 288
- Niulun (island), 198
- Niya, 25
- Nkole, 415
- Nobadia, 53
- Normandy, 15
- Norway, 15, 151
- Nosimbazaha (island), 411
- Nosy Be (island), 128, 140, 141, 373, 374, 376, 389, 557, 562
- Nosy Boina, 560

- Nosy Makamby (island), 557, 558
 Nosy Mamoko (island), 374, 376, 557, 562
 Nosy Mangabe (island), 142, 566
 Nosy Manja (island), 456, 557, 558, 561, 611
 Nosy Varika, 410
 Nosy Voalavo, 571
 Novgorod, 15, 163, 165, 293
 Nqoma, 115
 Ntabazingwe, 334
 Ntsaweni, 370
 Ntusi, 365
 Nubia, 51, 53, 68, 113, 311
 Nuremberg, 384
 Nyasa (lake), 106
 Nyoro, 415
 Nzindani, 126
 Nzuwani, 126

 Obolla (al-), 64
 Oceania, 398
 Okavango (river), 115
 Oman, 11, 27, 38, 39, 47, 59, 60, 62, 63, 64, 68, 81, 92, 106, 111, 112, 120, 134, 248, 284, 291, 295, 317, 318, 319, 324, 325, 328, 333, 347, 350, 356, 363, 367, 392, 515, 538, 542, 551, 573, 577, 660, 666, 668
 Ongoni, 597
 Oñilahy (river), 390
 Onin, 278
 Oran, 441
 Orang Laut, 277
 Ordos, 32
 Ordu Balik, 161
 Orissa, 13, 60, 73, 74, 75, 76, 86, 91, 216, 220, 221, 225, 228, 229, 233, 241, 244, 250, 456, 478, 485, 486, 494
 Orkhon (valley), 161
 Orontes (river), 64
 Osha, 539
 Oslo, 590
 Ottoman Empire, 297, 433, 439, 443, 446, 449, 450, 451, 454, 455, 457, 479, 514, 516–518, 520, 534, 604, 633, 637, 664, 685, 686
 Ötüken, 3
 Oxford, 166, 167
 Oxus (river), 64, 281, 282, *see also* Amu Darya (river)
 Oyo (kingdom), 440
 Ozi, 348

 Pacific Ocean, 61, 132, 449, 455, 609, 660
 Padang Lawas, 228
 Pagan, 85, 95, 156, 224, 231, 240, 253, 254, 255, 257, 269, 270, 274, 341
 Pagaruyung, 271
 Pahang, 198, 266, 271, 275, 462, 500, 508, 513
 Pajajaran, 503
 Pakistan, 141, 229, 319, 626
 Pāla (kingdom/empire), 11, 13, 16, 72, 76, 83–84, 91, 93, 97, 216, 221, 222, 228, 237, 258
 Palas Pasemah, 89
 Palawan, 510
 Palawan (island), 500
 Palebuan, 101
 Palembang, 24, 28, 29, 37, 61, 86, 88, 89–91, 92, 100, 103, 137, 149, 176, 226, 227, 228, 260, 261, 262, 266, 271, 277, 347, 380, 420, 462, 463, 470, 496, 497, 503, 504, 507, 508, 589
 Palermo, 67, 151, 152
 Palestine, 6, 13, 43, 56, 67, 284, 285, 286, 290, 301, 663
 Pali, 270
 Pallava (kingdom/empire), 11, 79, 84–86, 94, 100, 221, 222, 223, 633
 Pallava culture, 86, 88, 93, 97, 102, 222, 265
 Pallur, 86
 Palmyra, 663
 Pamanzikele, 130
 Pandalayini, 324
 Pandanan, 500, 510, 512
 Pandua, 492
 Pāṇḍuranga, 61, 96, 97, 227, 256, 267, *see also* Phan Rang
 Pāndya (kingdom), 80, 82, 103, 223, 225, 238, 241, 278, 280, 292, 324, 630, 677
 Panga ya Saidi Cave, 114
 Pangalanes (canal), 387
 Pangani valley, 121
 Pannonia, 16
 Panpan, 24, 88, 91
 Papphala, 227
 Pare, 340
 Paris, 153, 166, 167, 286, 565
 Parma, 335
 Parthian Empire, 629, 630, 633, 663

 Pasai/Pasei, 374, 494, 504, 505, 507
 Pasai/Pasei (sultanate), 211, 251, 268, 271, 278, 310, 418, 448, 456, 462, 497, 498, 513, 662
 Pase, 502, 508, 513; *see* Pasai
 Pasemah, 88
 Pasisir, 278, 501, 503
 Pate, 330, 340, 349, 358, 364, 538, 539, 608
 Pate (island), 17, 109, 110, 111, 119, 122, 123, 348, 352, 449, 457, 537, 538, 539, 551, 608
 Patna, 72
 Pattadakal, 80
 Pattan, 479
 Pearl River, 34
 Pedir, 480, 498, 508
 Pegu, 60, 93, 95, 227, 246, 253, 269, 272, 448, 480, 488, 492, 494, 498, 500, 504, 506, 507, 508, 512, 513
 Peloponnese, 516
 Pelusium, 64
 Pemba (island), 11, 17, 38, 60, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 122, 124, 127, 128, 132, 142, 329, 339, 341, 344, 345, 348, 350, 351, 353, 354, 355, 357, 360, 377, 536, 549, 550, 660
 Pengfeng, 198
 Pengkalan Bujang, 92, 259
 Peoha, 77
 Pera, 286, 442
 Periyapattinam, 240, 244, 250
 Perlak, 268
 Perm, 235
 Persia, 6, 13, 17, 23, 24, 28, 29, 38, 39, 43, 46, 47, 48, 50, 57, 63, 65, 67, 68, 69, 77, 80, 107, 108, 119, 122, 124, 130, 141, 155, 161, 162, 164, 170, 198, 206, 225, 234, 235, 238, 243, 280, 281, 283, 288, 303, 308, 310, 314, 344, 346, 348, 350, 408, 441, 443, 480, 492, 512, 520, 626, 637, 641, 642, 660, 665, 667, 668; *see also* Iran
 Persian culture, 11, 24, 25, 44, 56, 57, 66, 67, 120, 132, 168, 205, 231, 234, 241, 243, 246, 269, 280, 281, 294, 295, 296, 345, 346, 347, 351, 353, 362, 447, 477, 478, 481, 487, 493, 516, 518, 550, 577, 593, 668
 Persian Gulf, 3, 6, 11, 12, 14, 17, 27, 37, 38, 39–40, 41, 45, 50, 59, 61,

- 62, 65, 70, 79, 81, 83, 87, 90, 92, 94, 104, 108, 111, 112, 113, 114, 116, 117, 118, 119, 120, 121, 123, 124, 130, 135, 140, 141, 142, 149, 156, 157, 159, 162, 165, 177, 208, 218, 220, 236, 237, 248, 249, 279, 280, 283, 284, 290–297, 317, 319, 325, 328, 329, 332, 344, 345, 346, 348, 349, 353, 355, 364, 367, 376, 388, 389, 408, 452, 457, 479, 481, 482, 485, 487, 490, 491, 514, 518–521, 537, 574, 603, 605, 609, 618, 619, 620, 623, 626, 629, 648, 654, 660, 665, 682
- Peshawar, 230
- Phalaborwa, 115, 335
- Phan Rang, 96, 97, 104, 268; *see also* Pāṇḍuranga
- Phatthalung, 19
- Phayao, 270
- Phetburi, 270
- Philippines, 28, 62, 104, 143, 198, 201, 265, 267, 278, 418, 452, 471, 498, 565, 566, 609
- Phnom Penh, 511
- Phoenicia, 625, 662, 679
- Phra Narai, 93
- Piranmalai, 236
- Pisa, 154, 155, 284, 301, 307, 679
- Plaisance, 442
- Plaosan, 98
- Plum (island), 411
- Po (river), 8
- Po (valley), 436
- Po Nagar, 96
- Po'an, 24
- Poitiers, 6, 44
- Poland, 151, 163, 449, 450, 517
- Poli, 24, 88
- Polonnaruwa, 87, 225, 258
- Polushi, 88
- Pong Tuk, 94
- Poni, 105, 183, 198, 262, 265
- Ponnani, 489
- Pont Drift, 116
- Porto Amelia, 393
- Portugal, 170, 433, 437, 439–441, 444, 446, 451, 453, 454, 455, 456, 467, 574, 599, 602–616, 686
- Portuguese culture, 609
- Poulo Weh, 462, 492
- Prambanan, 97, 100
- Prei Khmeng, 95
- Provence, 154
- Ptolemaic Empire, 627
- Pulicat, 236, 251, 448, 486, 487, 488, 489, 506, 508, 609
- Pullobay (island), 574
- Pulo Weh, 574
- Punjab, 75, 76, 79, 216, 229, 232, 237, 249, 477
- Punta Dundo, 110, 115
- Purana Qila, 73
- Purandarapura, 95
- Puri, 233, 486
- Qal'at 'Abd al-Rahman, 283
- Qal'at al-Bahrayn, 284
- Qalāwūn, 177
- Qalhāt, 291, 293, 295, 519
- Qamar (island), 271
- Qanbalū, 17, 111, 112, 113, 119, 132, 133, 134, 135, 367
- Qāqula, 61, 268
- Qarakhitay (khānate), 200, 281, 288
- Qasr Ibrim, 53
- Qatif, 247, 293, 295
- Qays (island), 70, 149, 219, 240, 249, 280, 283, 284, 291, 292, 293, 294, 298, 302, 318, 319, 320, 325, 326, 332, 333, 353, 355, 605, 660, 677
- Qazwin, 248
- Qin Empire, 32, 628, 637, 639
- Qinghai, 460
- Qingyuan, 180, 200, 209
- Qomr/Qomayr, 134, 136, 553, 569
- Quang Nam, 96
- Quanzhou, 5, 12, 26, 36, 37, 172, 180, 182, 184, 185, 190, 193, 194, 196, 197, 199, 201, 205, 206, 207, 208, 209, 210, 211, 212, 214, 224, 240, 250, 252, 263, 266, 267, 272, 276, 278, 293, 295, 318, 471, 496, 664, 676
- Querimba (islands), 537, 608
- Qui Nhon, 256, 462
- Quilon, 39, 82, 208, 212, 236, 380, 489, 491
- Quinsai, 207
- Quiteve, 563, 588, 596
- Qum, 291
- Qumr, 137, 140, 380, 381, 648
- Qumr Zangi, 134, 380
- Qūṣ, 303, 309, 313, 315, 316
- Qusayr, 313, 316, 528
- Qusayr al-Qadim, 363, 537
- Radama (islands), 562
- Radhan, 9
- Ragusa, 450, 517
- Rajaraheshvara, 222
- Rājasthān, 76, 78, 173, 217, 218, 235, 241, 375, 477
- Rājendrachola, 227
- Rajput kingdoms, 173, 238
- Rakai Pikatan, 100
- Ramena, 571
- Ramla, 64
- Rāmni, 266
- Rangazavaka (lake), 410
- Ranomena (lake), 551, 588
- Ras al-Hadd, 60, 120, 551
- Ras Hafun,
- Ras al-Milh, 570
- Ras Mkumbuu, 109, 111, 122, 129, 346, 350
- Ras Musandam, 628
- Rāshtrakūta (kingdom/empire), 10, 13, 16, 72, 79–83, 633
- Rasoabe (lake), 395
- Rasoamasay (lake), 395
- Rasūlid sultanate, 162, 308, 311, 312, 313, 315, 316, 317–328, 352, 447, 524, 531–533, 673, 674, 677
- Ratanpor, 479
- Ratuboko, 97, 99
- Ravenna, 9
- Rayy, 10, 49, 282, 284
- Red River, 33, 96, 273, 274, 511, 624
- Red Sea, 12, 16, 17, 38, 41, 50, 51, 57, 59, 64, 65, 70, 82, 113, 118, 120, 121, 124, 132, 149, 157, 159, 162, 165, 175, 177, 200, 218, 236, 279, 283, 284, 290, 298, 300, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 319, 322, 325, 333, 346, 353, 363, 394, 441, 447, 451, 457, 478, 479, 480, 482, 491, 494, 514, 519, 520, 521, 523, 524, 525, 526, 528, 530, 532, 534, 537, 573, 574, 604, 608, 620, 628, 629, 630, 665, 666, 667, 682
- Rembang, 504
- Rezoky, 177, 378, 390, 391, 583, 584
- Rheinland, 436
- Rhine (region/valley), 8, 163, 445
- Rhodesian plateau, 548
- Riau (archipelago), 606
- Rif, 322
- Rift valley, 106
- Rio de Oro, 439

- Roha, 307
 Roman Empire, 3, 47, 52, 66, 182, 215, 628, 629, 630, 633, 640, 658, 660, 663, 664, 665, 667, 670, 672, 675, 678
 Rome, 64, 175, 293
 Rovuma (river), 364
 Rūm, 280, 282, 285, 288, 324
 Runyani Ruin, 116
 Russia, 8, 14, 16, 54, 58, 151, 155, 161, 249, 288, 290, 291, 297, 301, 310, 433, 438, 451, 455, 517, 666
 Ruwenzori, 379
 Rwanda, 337, 588
 Ryūkyū (islands), 19, 199, 214, 435, 452, 469, 470, 508

 Sabah, 104
 Sabzavr, 294
 Sada, 561, 562, 570, 584, 613
 Sada (kingdom), *see* Guinguimaro (kingdom)
 Sadia, 584, 585
 Sadras, 236
 Safavid Empire, 454, 517, 518, 633
 Saffarid Emirate, 13, 67
 Sagres, 439
 Sahafary, 378
 Sahara, 52, 54, 158, 313, 441, 656, 662, 668, 673
 Sahara (river), 387
 Sahel, 306
 Saint-Augustin (Bay of), 390, 457, 572, 575, 599, 610
 Sainte-Luce (Bay of), 411
 Sainte-Marie (island), 570, 571
 Saint-Lawrence (island), 575, 610, 614; *see also* Madagascar
 Sajo, 163
 Sakalava, 422, 423, 424, 550, 551, 587
 Sakalava Menabe, 584
 Sakaleoña (river), 378, 394, 403, 568
 Salah, 342
 Salerno, 15, 166
 Saleyer (island),
 Samandar, 83
 Samanid Emirate, 13, 17, 67
 Samar, 265
 Samarkand, 3, 9, 10, 23, 35, 44, 45, 46, 49, 70, 280, 281, 287, 288, 289, 293, 297–298, 443, 515, 516
 Sāmarrā, 45, 49, 59, 114, 362
 Samatata, 228
 Sambirano (kingdom), 561
 Sambirano (region), 556
 Sambirano (river), 373, 562
 Sambirano (valley), 561
 Samudra, 176, 268, 272, 277, 461, 462, 497, 498
 Samudra-Pasai (sultanate), 176, 268, 271, 272, 277, 461, 462, 497, 498, 678
 Samyana, 82
 San Foqi, 277
 Sandapur, 245, 606
 Sandrakatsy, 142, 143, 375, 376
 Sandrañanta (valley), 406
 Sanf, 61
 Sanfoqi, 197, 198, 199, 262, 265, 266, 277
 Sanga, 551
 Sangeang (island), 502
 Sanjan, 82
 Sanjé ya Kati, 109, 127, 342, 346, 350, 351, 353
 Santiago de Compostela, 16
 São Tomé (island), 454
 Sarai, 164, 297
 Sarandib, *see* Sri Lanka
 Sassanid Empire, 6, 7, 21, 23, 24, 29, 35, 39, 42, 43, 47, 48, 51, 65, 68, 107, 132, 231, 633, 660, 667, 668
 Sātḡāon, 492, 494
 Satingphra, 92, 93, 260
 Saurashtra, 79, 225
 Save (river), 115, 364, 539, 544
 Sawākin, 308, 525, 528
 Sawankhalok, 510
 Şayūna, 353, 354
 Scandinavia, 14, 15
 Schroda, 115, 116, 117, 334, 335
 Seistan, 69
 Selangor, 260
 Seleucid Empire, 627
 Seljuk Empire, 122, 149, 177, 229, 231, 280–287, 306, 517, 633, 664
 Sembiran, 103
 Sena, 354, 608
 Sena Empire, 84, 216, 228–229, 237
 Senegal, 51, 172, 441, 638, 658
 Senegal (river), 51, 173
 Senegal (valley), 157
 Senegambia, 158
 Seoul, 463
 Serbia, 151, 169, 175, 449, 516
 Seti, 370
 Sevilla, 286
 Seychelles, 575
 Shaanxi, 26
 Shākhambari, 78, 229
 Shandong, 28, 181, 474
 Shang state, 624, 625
 Shanga, 109, 110, 111, 113, 116, 117, 118, 119, 120, 121, 122, 123, 127, 129, 131, 329, 335, 339, 340, 341, 342, 344, 345, 346, 348, 349, 350, 352, 353, 354, 355, 357, 367, 374, 377, 539
 Shangani, 549
 Shanghai, 190, 192, 209, 212
 Shankhay (sea), 61
 Shanxi, 289
 Sharma, 113, 120, 283, 284, 318, 319, 320, 346, 347, 348
 Shashe valley, 334
 Shātavāhana kingdom, 630, 633
 Sheh county, 474
 Shenan, 294
 Shensi, 181, 185
 Shepo, 35, 103, 198, 199, 252, 264, 265
 Shihr, 113, 197, 284, 318, 319, 320, 323, 324, 325, 342, 363, 521, 533
 Shikar, 218
 Shikarpur, 236
 Shilifoshi, 24, 37
 Shilizun, 24
 Shiraz, 27, 59, 282, 286, 291, 296, 344, 346, 369, 481, 516, 519
 Shize, 24
 Shona, 587
 Shrāvastī, 73
 Shungwaya, 106, 348
 Shwesandaw, 228
 Siam, 202, 215, 255, 274, 275, 461, 462, 469, 470, 480, 494, 500, 506, 509, 510, 511, 513. *see* Thailand
 Siberia, 58, 455, 666
 Sibudu, 541
 Sichuan, 18, 22, 32, 34, 40, 181, 188, 189, 190, 195, 202
 Sicily (island), 8, 13, 49, 53, 67, 135, 149, 151, 153, 164, 166, 167, 177, 301, 333, 348
 Siddhpur, 233
 Siffin, 59
 Sijilmāsa, 51, 52, 53, 159, 163, 168, 303, 306, 439, 440

- Sikendeng, 91
 Silla (kingdom), 5, 28, 31, 36
 Sima, 125, 126, 129, 130, 142, 351,
 366, 367, 370, 552, 554
 Simhapura, 256
 Sinai, 528
 Sindh, 47, 60, 61, 64, 65, 68, 76, 77,
 80, 81, 120, 121, 122, 130, 135, 198,
 216, 217, 230, 244, 246, 295, 317,
 328, 332, 355, 379, 479
 Singapore, 274, 275, 277, 471
 Singhasari, 264, 272
 Singhasari (kingdom), 149, 176,
 251, 255, 264, 271, 272
 Sīrāf, 11, 36, 38, 39, 40, 59, 60, 62,
 63, 70, 81, 82, 90, 111, 114, 117, 120,
 121, 130, 134, 149, 199, 219, 283,
 284, 318, 319, 346, 382, 667, 668
 Sirba (valley), 173
 Siwa culture, 350
 Sīyāḍuni, 73
 Siyu, 341, 350, 354
 Soba, 53
 Socotra (island), 46, 59, 70, 82,
 325, 333, 534, 537, 605
 Sodok Kak Thom, 98
 Sofala (city), 342, 358, 359, 360,
 364, 375, 383, 409, 454, 538, 539,
 540, 541, 542, 546, 547, 548, 549,
 551, 603, 604, 607, 608, 613, 658
 Sofala (coast), 14, 38, 106, 110, 111,
 112, 113, 114, 115, 117, 124, 133, 134,
 135, 137, 140, 157, 218, 302, 331,
 333, 342, 352, 354, 355, 368, 379,
 381, 410, 537, 542, 544, 607, 608
 Sofia (river), 138
 Sogdiana, 3, 16, 23, 24, 29, 31, 35,
 44, 67
 Sohār, 111, 134
 Sojomerto, 97
 Soldaia, 155
 Somalia, 106, 118, 119, 129, 196,
 197, 346, 374, 533, 558
 Somana, 346
 Sōmanāth, 76, 135, 218, 229, 236,
 284, 353
 Sonārgāon, 242, 448, 492
 Song Empire, 13, 147–148, 155–156,
 161, 178–203, 205, 207, 213, 227,
 251, 256, 263, 633, 636, 637, 638,
 667, 673, 674, 675, 676
 Songhay (kingdom/empire), 157,
 158, 313, 440, 441, 530
 Songjiang, 213
 Songkhla, 92, 93, 256, 260
 Songo Mnara, 342, 363, 535,
 536, 541
 South Africa, 116, 335, 541
 Soyo, 332
 Spain, 4, 6, 7, 8, 43, 45, 47, 49, 51,
 52, 53, 54, 64, 66, 68, 69, 150, 151,
 155, 158, 163, 164, 165, 170, 200,
 285, 301, 302, 303, 305, 318, 346,
 433, 437, 439, 442, 444, 451, 453,
 455, 457, 565, 635, 657, 685, 686
 Speyer, 163
 Spice Islands, 279
 Sri Lanka (formerly Ceylon), 24,
 25, 27, 39, 60, 61, 62, 80, 81, 82,
 84, 85, 86–87, 90, 91, 93, 100, 111,
 114, 135, 136, 149, 195, 198, 208,
 218, 221, 222, 225, 226, 227, 239,
 240, 243, 248, 253, 254, 257, 258,
 259, 266, 267, 272, 295, 304, 306,
 355, 365, 381, 394, 400, 403, 410,
 423, 427, 434, 452, 456, 461, 462,
 465, 467, 483, 484, 485, 487, 489,
 491, 600, 606, 628, 645, 656,
 663, 666, 667
 Sri Thap, 94
 Srikshetra, 95
 Śrīwijaya, 11, 13, 16, 24, 37, 39, 61, 63,
 64, 84, 86, 88–91, 92, 93, 95, 96,
 97, 98, 99, 100, 101, 102–103, 104,
 119, 132, 133, 135, 137, 141, 142, 149,
 169, 176, 184, 198, 199, 226, 227,
 228, 252, 254, 259, 260, 262, 263,
 266, 267, 269, 270, 271, 275, 276,
 277, 368, 372, 402, 410, 411, 412,
 418, 419, 420, 421, 496, 504, 589,
 605, 606, 647, 658, 661, 664, 679
 Sudan, 51, 52, 68, 118, 159, 174, 313,
 314, 394, 440, 441, 530, 652
 Sudhamavati, 93
 Suez, 64
 Suez (Gulf of), 531
 Sugidan, 265
 Suḥār, 11, 39, 47, 59, 60, 62,
 113, 116, 120, 123, 130, 185, 319, 347
 Sukadana, 265
 Sukhothai (kingdom), 270, 510
 Sulawesi, 91, 265, 277, 278, 499,
 500, 502, 507, 508, 575, 588
 Sulawesi Sea, 91
 Sultaniyya, 520
 Sulu (archipelago), 28, 211, 273,
 469, 498
 Sulu Sea, 276
 Sumatra (island), 11, 19, 24, 27, 35,
 40, 61, 62, 73, 82, 87, 88, 90, 91,
 92, 96, 100, 101, 103, 104, 133, 135,
 136, 137, 170, 187, 195, 196, 197, 198,
 208, 209, 211, 212, 224, 225, 227,
 228, 246, 247, 250, 251, 257, 259,
 260, 263, 264, 265, 266, 267, 268,
 269, 271, 275, 277, 278, 335, 367,
 368, 375, 377, 379, 380, 402, 404,
 406, 410, 411, 412, 425, 434, 448,
 456, 461, 462, 463, 466, 468, 480,
 492, 494, 496, 497, 498, 502, 504,
 506, 513, 519, 524, 573, 574, 575,
 589, 603, 606, 609, 663, 665
 Sumbawa (island), 502
 Sumer, 622
 Sunda, 104, 198, 266, 271, 277, 503,
 504, 507, 508, 574
 Sunda (Strait of), 503, 575
 Sungai Mas, 92
 Sūr, 240, 291
 Surabaya, 101, 104, 278, 462,
 503, 511
 Surat, 324, 479, 488, 579, 609
 Surattani, 257, 260
 Sus al-Aksa, 64
 Susa, 130
 Susiana, 618
 Suyab, 3, 23
 Suzhou, 179, 192, 213, 459
 Swahili culture, 11, 14, 106–137,
 170, 328, 329–370, 549, 630,
 648, 654
 Sweden, 14, 15, 163
 Syracuse, 13, 67
 Syria, 6, 14, 17, 43, 44, 49, 51, 68, 69,
 164, 177, 247, 280, 285, 290, 291,
 294, 297, 299, 301, 303, 306, 307,
 308, 310, 311, 312, 318, 320, 322,
 435, 440, 443, 457, 492, 518, 519,
 522, 523, 524, 526, 527, 528, 531
 Syriam, 512
 Ta'izz, 309, 324, 531
 Tabaristan, 69
 Tabriz, 172, 173, 175, 209, 249, 290,
 291, 293, 296, 297, 443, 457, 515,
 516, 518, 519
 Tadmekka, 52
 Tahert (imamate), 52, 53, 167
 Ṭāhirid sultanate, 457, 529,
 533–534, 676
 Tai (lake), 192
 Taicang, 212

- Taiwan, 19
 Taizhou, 200
 Takaddā, 158, 313
 Takht i Suleyman, 367
 Takola (Takuapa), 61, 86, 91, 92, 93, 227, 254, 258, 266, 268
 Takrūr, 51, 54, 157
 Takuapa, *see* Takola (Takuapa)
 Tala, 253
 Talakadu, 228
 Talaky, 388, 389
 Talang Kikim, 90
 Talas (river), 5, 31, 32, 38, 39, 45, 118
 Talma (river), 93
 Tāmbralinga, 94, 176, 198, 227, 254, 257, 258, 259, 266, 270, 275
 Tamentit, 441
 Tamil (state/kingdom), 245, 248, 424, 484, 487
 Tamil Nadu, 74, 84–86, 87, 225, 226, 479, 484, 487, 488, 669
 Tāmralipti, 83
 Tana (Black Sea), 169, 316
 Tana (in India), 325
 Tana (river), 106, 110, 114, 122, 340, 538, 539
 Tana Ware (TIW), 106, 107, 109, 112, 119, 120, 121, 124, 320, 348
 Tānah, 324
 Tañāla, 397, 398, 406, 413, 420, 421, 424, 426, 656
 Tañāla (culture), 416
 Tañāla (kingdom), 420, 596
 Tang Empire, 13, 20, 25, 32, 33, 164, 633, 637, 638, 674, 676
 Tanga, 120, 536
 Tangasseri, 248
 Tangier, 64
 Tanjāvūr, 222, 223, 226
 Tanjore, 226, 266
 Tanjungpura, 271
 Tanzania, 107, 110, 121, 122, 129, 357, 401, 481, 588, 598
 Tanzhou, 180
 Tarim (river), 23, 25, 30, 32, 33, 110
 Tartary, 297
 Tartessos, 51
 Tārumā, 394
 Tashkent, 23
 Tattānandapura, 73
 Taukome, 115, 117, 334
 Tegdaoust, 52, 159
 Teghaza, 441
 Tell Asmar, 620
 Telugu, 487
 Temasek, 277
 Tenasserim, 247
 Teniky, 584
 Tennasserim, 253
 Tenochtitlan, 455
 Terek (river), 289
 Terengganu, 260, 266, 269, 275
 Ternate (island), 211, 500, 503, 507
 Terqa, 623
 Tete, 586
 Tha Rua, 92
 Thailand, 12, 28, 93, 95, 174, 206, 224, 250, 256, 258, 261, 265, 267, 270, 273, 274–275, 470, 493, 500, 504, 505, 507, 511, 536, 592
 Thailand (Bay of), 448
 Thailand (Gulf of), 93, 94, 256, 270, 274, 278, 435, 469, 503, 509
 Thai–Malay peninsula, 19, 24, 28, 36, 38, 61, 62, 63, 68, 86, 87, 88, 90, 91–93, 95, 134, 149, 198, 227, 240, 250, 252, 253, 254, 256, 257, 259, 261, 266, 267, 269, 270, 271, 274, 275, 277, 278, 279, 295, 400, 418, 461, 498, 506, 509, 513, 665
 Thana, 219, 235, 325, 328, 606
 Thaton, 93, 95, 252, 253
 Thatta, 479
 Thessaly, 516
 Thrace, 154, 175
 Three Pagodas Pass, 94, 95
 Three-Mile-Water, 116
 Thulamela, 338, 360, 361, 541
 Thung Kuk, 114
 Thuringia, 443
 Tib, 292
 Tibet, 13, 16, 25, 32, 33, 34, 51, 61, 84, 231, 249, 251, 303
 Tidore (islands), 211, 500
 Tienshan mountains, 288
 Tigris (river), 9, 42, 43, 61, 64, 291, 618, 666
 Tihāma, 327, 532
 Timbuktu, 158, 440, 441
 Timor (island), 89, 101, 198, 261, 278, 421, 588, 589
 Tingzhou, 22, 33
 Tiri Rajā (islands), 571
 Tirukkurunkudi, 479
 Tirumalairayanpattinam, 486
 Tirupati, 488
 Tiruppūlaivanam, 236
 Tirupputaimarutur, 164
 Tissamaharama, 62, 83
 Tiyūma, 61
 Tiz, 122, 283, 304, 317, 318, 319, 320, 348
 Tlemcen, 439
 Toamasina, 394, 411
 Toghuzghuz, 64
 Togo, 596
 Toledo, 151, 152
 Tondaimandalam, 84, 238
 Tondalava, 389
 Tonkin, 99, 198, 199, 508, 629
 Tor (al-), 528
 Toraja, 588
 Tordesillas, 453
 Toulouse, 163
 Toutswe, 115, 334, 337
 Toutsuwemogala, 334
 Tra Kieu, 19, 61, 96, 256, 273
 Trabzon, 443, 516
 Tran-nam, 98
 Tranovato, 582, 583
 Tranquebar, 236
 Transcaucasia, 630
 Transoxiana, 12, 17, 46, 52, 61, 67, 160, 164, 170, 289, 297, 461
 Transvaal, 115
 Trilokyapuri (river), 276
 Tripoli, 311
 Tripuri, 78, 229
 Tritrivakely (lake), 143
 Trowulan, 278
 Tsavo, 302, 339
 Tshaitshe, 334
 Tsiandrorra, 143, 387, 388
 Tsingoni, 409
 Tsiribihina (river), 584, 585
 Tsodilo Hills/Mountains, 115, 116
 Tuat, 441
 Tuban, 278, 503
 Tumbatu (island), 109, 342, 346, 350, 352, 354, 361, 366, 549
 Tumbe, 112, 114, 116, 127, 341
 Tumu, 468
 Tungabhadra (river), 232, 245
 Tunghi Bay, 124
 Tunis, 439, 441
 Tunisia, 13, 17, 52, 67, 69, 303, 313
 Tūr, 316
 Turfān, 22, 23, 25, 163, 190, 471, 516
 Turiang, 512
 Turkestan, 68, 493
 Turkey, 247, 454, 478, 492, 512, 664

- Turkish Empires, 3, 8, 10, 13, 16,
 23, 31, 160, 229, 282, 643; *see also*
 Ottoman Empire
 Turkmenistan, 49, 620
 Tuscany, 436
 Twante, 536
 Tyrol, 443

 U Thong, 94, 98
 Ubullah (al-), 38, 39
 Uganda, 337, 341, 539, 588
 Ugarit, 663
 Uighur Empire, 10, 13, 16, 25, 161
 Ujjain, 10, 73, 121
 Ukunju Cave, 113
 Umayyad Emirate (Cordoba), 7,
 45, 52, 53, 66
 Umayyad Empire, 6, 11, 17, 25, 43,
 44, 45, 50, 51, 59, 60, 69, 639, 671
 Ungama, 393
 Unguja Ukuu, 17, 107, 109, 111, 112,
 113, 114, 117, 118, 119, 121, 123, 127,
 133, 140, 141, 341, 342, 345
 Ungwana, 110, 117, 122, 129, 140,
 344, 393, 538, 539
 United Arab Emirates, 392
 United States, 641, 686, 687, 690
 Upemba, 551
 Upemba (river), 115, 337, 340
 Ur Empire, 622, 623
 Urals, 51, 68
 Urbino, 208
 Urgench, 169
 Uruk, 618, 619
 Urumqi, 289
 Urungwe, 540
 Utonga, 94, 540
 Utrecht, 686
 Uttar Pradesh, 78
 Uva (kingdom), 560, 561
 Uzaym (river), 48
 Uzbekistan, 49

 Vaisali, 73
 Vakinankaratra, 17, 143, 373, 385,
 387, 580
 Valencia, 49, 441, 565
 Vallabhi, 79
 Vamizi (island), 124
 Van (lake), 147
 Van Don, 273
 Vangaindrano, 422
 Vanuatu, 435, 646
 Vārānasī, 73, 75, 216, 230
 Vardhamana, 79
 Varna, 449, 516
 Vatomandry, 571
 Velpamadugu, 488
 Venad (kingdom), 241
 Venezuela, 453
 Vengi, 79, 228
 Venice, 8, 14, 32, 154, 155, 159, 164,
 165, 172, 173, 174, 175, 177, 206,
 272, 284, 286, 293, 307, 313, 314,
 316, 433, 435, 436, 437, 441, 442,
 443, 449, 450, 452, 454, 455, 491,
 517, 518, 522, 524, 525, 528, 602,
 603, 604, 605, 607, 645, 660,
 675, 679, 688
 Verdun, 8
 Vezo, 422
 Vezo-Sara, 423
 Victoria (lake), 365
 Vietnam, 26, 28, 62, 87, 96, 102,
 130, 176, 201, 202, 206, 237, 256,
 279, 341, 363, 427, 434, 435, 448,
 460, 461, 468, 473, 500, 511,
 536, 628
 Vieux Sima, 111, 126
 Vijaya, 96, 104, 256, 462, 511, 512
 Vijayanāgara, 173, 176, 232, 244,
 245, 247, 249, 251, 275, 447, 456,
 477, 478, 481, 482, 483–492, 508,
 520, 604, 608, 609, 633
 Vijayanāgara (kingdom/empire),
 231, 246, 477, 478, 507, 633
 Vijayapura, 88
 Vilanculos Bay, 109
 Virginia, 687
 Visākhapaṭṭinam, 224, 226
 Visigoth kingdom, 6, 9
 Vohemar/Vohemary, 141, 177, 372,
 376, 377, 380, 381, 392, 393, 403,
 411, 449, 457, 555, 556, 559, 561,
 563, 564, 565, 566, 567, 568, 571,
 576, 589, 590, 600, 613, 614, 648
 Vohibazimba, 586
 Vohidrazaña, 413, 568
 Vohimasina, 580
 Vohitrandraiana, 582
 Volga (river), 9, 15, 200, 289,
 293
 Volga (valley), 8, 10
 Volovolo (river), 389
 Volta (river), 52, 173
 Vonizongo, 581
 Vumba, 340
 Vung Tau, 96

 Wadi Allaqi, 306
 Wādi Surdud, 353
 Walaing, 16, 24, 88, 98, 99
 Wallachia, 516
 Waqwaq, 61, 132, 379, 542, 648
 Warangal, 235, 241
 Wat Keo, 93
 Wat Long, 93
 Wat Phra Barommatham, 93
 Wazi Hill, 338
 Webi Shebele (river), 110, 547
 Wei (state), 20, 29
 Wei (valley), 34
 Wenzhou, 12, 180, 200
 Wessel Islands, 361
 Wonoboyo, 102
 Woolandale, 336
 Wwanin, 278

 Xian (city), 18, 26
 Xian (state), 256, 270, 275
 Xianfu, 35
 Xiang (river), 34
 Xiezhou (lake), 32
 Xinjiang, 25, 289
 Xintuo, 198
 Xiongnu Empire, 160, 288, 628
 Xixia Empire, 185, 190, 195, 288
 Xunmalin, 289
 Xuzhou, 181

 Yādava (kingdom), 232, 241
 Yamaguchi, 470
 Yaman (al-), 317
 Yamato, 28
 Yanbu, 344
 Yangzhou, 5, 26, 27, 31, 205
 Yangtze (region), 4, 18, 20, 188,
 190, 191, 685
 Yangtze (river), 18, 26, 34, 40,
 179, 180, 190, 263, 446, 624,
 666, 682
 Yangtze (valley), 179, 205, 213, 472
 Yap, 500
 Yarang, 93, 98
 Yavadvipa, 97
 Yazd, 297, 519
 Yazid (river), 287
 Yellow River, 4, 18, 19, 180,
 446, 624
 Yellow River (region), 179
 Yellow River (valley), 36, 624
 Yemen, 13, 14, 17, 47, 65, 67, 69, 70,
 107, 119, 120, 121, 133, 157, 162,

- 173, 177, 199, 218, 237, 239, 247,
248, 249, 281, 283, 291, 298, 300,
301, 306, 308, 309, 311, 312, 314,
315, 316, 317–328, 333, 345, 348,
352, 353, 359, 363, 370, 374, 375,
403, 444, 451, 457, 487, 521, 523,
524, 525, 528, 529, 531–534, 551,
555, 573, 660, 666, 670, 671,
673, 677
Yin-shan, 203
Yogyakarta, 98, 99, 101
Yongxian, 27
Yorkshire, 8
Yuan (state/empire), 161, 174,
203–212, 249, 269, 270, 271, 273,
276, 289, 633, 637, 660, 676
Yunnan, 30, 31, 33, 93, 174, 176,
195, 205, 228, 235, 237, 253, 269,
288, 435, 452, 460, 468, 469,
492, 510, 512, 628, 669
Yurt, 64

Zābağ/Zabaj, 37, 39, 61, 90, 91,
100, 133, 135, 136, 137, 140, 367,
368, 402, 410, 411, 589
Zabīd, 67, 283, 309, 318, 324, 327,
533, 534
Zafār, 197, 323, 324, 325, 402,
490, 521

Zafimaniry, 399
Zaframinia culture, 408, 413, 414,
417, 419, 421, 425, 590
Zaire (valley), 115
Zaitun, *see* Quanzhou
Zambezi (region), 396, 540,
586, 596
Zambezi (river), 115, 124, 338, 353,
361, 392, 544
Zambezi (valley), 108, 114, 115, 338,
440, 539, 540, 541, 548, 585, 608
Zambia, 114, 115, 140, 334, 337, 342,
393, 396, 540
Zangistān, 347
Zanj, *see* Africa (East)
Zanzibar (island), 17, 109, 110, 111,
112, 113, 114, 119, 120, 122, 123,
127, 131, 133, 135, 137, 140, 196,
333, 339, 340, 342, 343, 345, 346,
348, 349, 350, 351, 352, 354, 355,
360, 365, 366, 383, 394, 547, 548,
549, 550, 577
Zanzibar (Strait of), 11, 111
Zaylā', 7, 133, 162, 322, 323, 451
Zedelghem, 186
Zeila, 537
Zerbad, 490
Zhanbei, 35
Zhanbo, 24

Zhancheng, 36, 198
Zhangzhou, 496, 503
Zhejiang, 33, 34, 180, 190, 353, 456,
472, 474
Zhenla, 24, 35, 94, 95, 198
Zhizo (culture), 115, 116, 334, 375
Zhizo Hill, 116
Zhongli, 196
Zhou (kingdom), 624, 625
Zhou (Later), 40
Zhou (Northern) (state), 18,
20, 625
Zhucheng, 180
Zhuloumi, 24
Zimbabwe (city), 334, 360, 361,
375, 559
Zimbabwe (culture), 170, 361,
543, 596
Zimbabwe (kingdom/state), 157,
173, 334, 336, 337, 338, 340, 360,
361, 366, 390, 449, 457, 479,
539–541, 542, 543, 544, 545,
546, 643
Zimbabwe (region), 38, 51, 53, 68,
115, 116, 140, 159, 334, 336, 337,
338, 340, 342, 354, 360, 361, 364,
365, 447, 540, 541, 607, 653, 664,
666, 673
Ziwa (culture), 115

NAME INDEX

- Aaron b. 'Amran, 64, 675
 Abaqa, 177, 290, 311
 'Abbās, 45
 'Abd al-'Azīz b. Manṣūral-Ḥalabī, 313
 Abd al-Malik, 44, 65, 111
 'Abd al-Masīḥ, 305
 Abd al-Raḥmān I, 45
 Abd al-Raḥmān III, 16
 'Abd al-Rahman ibn al-Jawzī, 333
 Abd al-Rahmin b. Abu Laili, 49
 'Abd al-Razzāq, 294, 295, 442, 485, 486, 490, 515, 519, 551, 605
 Abinal, P., 601
 Abitbol, M., 306
 Abraham, M., 85, 225
 Abraham ben Yijū, 220, 302, 303, 304
 Abramson, M. S., 35
 Abū al-'Abbās, 44
 Abū al-'Abbās (caliph), 6
 Abū l-'Abbās (merchant), 306, 656
 Abū al-'Abbas al-Ḥiḡazī, 267, 678
 Abū 'Alī, 105
 Abū Bakr, 6, 43, 135
 Abū Bakr (Salghurid dynasty), 293
 Abū Dulaf, 92
 Abū'l-Fidā', 381, 544
 Abū Ghālib, 305
 Abū Ḥasan, 104
 Abū Ishak of Cāzerūn, 209, 247
 Abū Ishāq, 209
 Abū Ishāq al-Kāzarūnī, 249
 Abū Ja'far al-Mansūr, 45
 Abu'l-Katā'ib, 305
 Abu'l-Khair, 305
 Abu al-Majd al-Sallāmī, 312
 Abu Musa, 346
 Abu'l Qasim ibn Qattan, 219
 Abū Ruh, 185
 Abū Sa'īd, 170, 177, 294, 296, 516
 Abū Yūsuf, 163
 Abū Zayd, 26, 36, 59, 60, 92, 101, 219, 364
 Abū Zikrī Kohen Judah, 303
 Abū Zikri Sijilmasī, 318
 Abu-Lughod, J., 107, 159, 455, 641
 Abungu, G. H. O., 106, 114, 597
 Acton, Lord, 602
 Adam (biblical character), 394, 415
 Adam (Persian monk), 35
 Adam, Guillaume (Dominican friar), 441
 Adamczyk, D., 15
 Adelaar, K. A., 372, 397, 406, 410, 411, 412, 426, 576, 577
 Adelard of Bath, 151
 Adil bin Mohammad Khan, 572
 Aditya I, 84, 87
 Adityavarman, 277
 Adshead, S. A. M., 4, 5, 11, 19, 20, 21, 29, 30, 32, 34, 42, 46, 49, 51, 66, 73, 178, 186, 191, 200, 464, 635
 Afonso V, 433
 Afonso, Pero, 546
 Agius, D. A., 323, 324
 Aglietta, M., 151, 152, 171, 652, 669, 688, 689
 Ahmad (merchant), 205
 Ahmad (sultan), 515
 Aḥmad b. Hilāl, 63
 Ahmad Shāh, 456, 478
 Aḥmad Shāh Bahmanī, 481
 Aibak, 230
 'A'icha, 43
 Aigle, D., 292
 Airlangga, 258, 260, 264, 513
 'Alā' ud-Dīn Husain Shāh, 493
 'Alā ud-Dīn Khaljī, 176, 231, 232, 235, 241, 242, 243, 676
 'Alā' ad-Dīn Muhammad, 287
 Alam, M., 243
 Albergaria, Lopo Suarez de, 603
 Albuquerque, Afonso de, 485, 490, 507, 520, 553, 574, 599, 603, 608, 611, 612, 613
 Albuquerque, Bras de, 575, 610, 611–612, 613
 Albuquerque, Pero de, 520
 Alcaçova, Diego de, 544, 547, 548
 Alcuin, 590
 Alexander III, 154
 Alexander the Great, 405, 505, 627, 628, 660
 Alexander, J., 47, 306
 Alexis I, 155
 al-Afdal, 307, 326, 328
 Alfonso V (king of Aragon), 451
 Alfonso V (king of Naples), 442
 Alfonso X, 165
 Algaze, G., 618
 'Alī (caliph), 6, 17, 43, 59, 297, 344, 345, 347
 Alī Bakr bin Salim, 370
 'Alī bin 'Alī, 350
 'Alī ibn al-Ḥasan, 345, 361
 'Alī ibn al-Ḥusayn, 344
 'Alī ibn Muḥammad, 69
 'Alī al-Jilānī, 525
 Alī Rāja, 677
 Alitavaratra, 590
 Allah, 462
 Allan (Jewish merchant), 318
 Allen, J. de V., 107, 112, 120, 122, 340, 348, 350, 351, 538
 Allibert, C., 112, 124, 126, 128, 130, 134, 141, 250, 339, 368, 377, 379, 382, 383, 394, 408, 462, 567, 572–573
 Allorge, L., 402
 Almeida, Francisco de, 537, 599, 603, 607
 Alpers, E. A., 330, 543, 545, 608, 652, 653
 Amadi Sharif, 409
 Amda Tsiyon, 162, 316
 Amigues, F., 565

- Amilhat-Szary, A.-L., 172, 446, 454, 497
 Amin, S., 650, 661
 Amir Khusrav, 365
 Amir Marjān, 676
 Amitābha Buddha, 30
 Amoghavarsha I, 80
 Amoghavajra, 89
 An, Z. S., 20, 159, 174, 472
 An Jiayo, 19
 An Lushan, 16, 30, 31, 45
 Anawrahta, 253
 Andaya, L. Y., 104, 420, 500
 Anderson, E. N., 161
 Anderson, R. Y., 160
 Andrade, Fernão Peres de, 471, 507
 Andrea da Perugia, 210
 Andriamandisoarivo, 585
 Andriamanelo, 406, 414, 581
 Andriamanjavona (legendary figure), 414
 Andriamasinavalona, 417, 428, 573
 Andriamasy, 596
 Andriambahoaka, 405
 Andriambahoaky (legendary figure), 413
 Andriambavirano (deity), 414
 Andrianampoinimerina, 428
 Andrianamponga, 581
 Andriandrakova (legendary figure), 413
 Andriandranoala, 125
 Andrianjaka, 427
 Andriantsimeto Rañaha, 589
 Andronicus I, 155
 Andronikos III, 169
 Angeli, Jacopo, 445
 Anheim, E., 310
 Anhilwada Pattan, 217
 Apellaniz Ruiz de Galarreta, F. J., 308, 523, 528, 529
 Appadurai, A., 652, 653
 Arasaratnam, S., 224
 Araujo, R. de, 507
 Ardant du Picq, C. P. M., 424
 Ardika, I. W., 102
 Aregimuti Raja, 507
 Arghūn, 290, 293
 Argiac, 574
 Argyropulos, 285
 Aristotle, 167, 286, 433, 602
 Arnau de Vilanova, 152
 Arnoux, M., 436
 Arrighi, G., 439, 640, 641, 651, 660, 665, 681, 684, 690
 Arya Chen Yen-Xiang, 504
 Āryabhata I, 73
 Ashikaga Takauji, 214
 Ashtor, E., 57, 283, 303, 308, 527, 528, 529
 Askia Muḥammad Ture, 313, 440
 al-Aṣraf Ismā‘īl, 316, 327
 Atahualpa, 457
 Athénor, C., 567
 Atwell, W. S., 472
 Aubaile-Sallenave, F., 47, 48
 Aubin, J., 485, 519, 520, 526, 671, 676, 677, 682
 Aufi, 217
 Augustus, 660
 Aung-Thwin, M., 93, 253
 Austin, P., 288
 Avalokitesvara, 85, 91
 Avelot, R., 586
 Averroes (Ibn Rushd), 53, 150, 167, 286
 Avicenna (Ibn Sīnā), 53, 66, 150, 285, 286
 Axelson, E., 409, 410, 537, 541, 599, 610, 611, 613
 Ayalon, D., 529
 Ayāz, 293
 Ayubi, N. N., 58, 69
 Azam Shāh, 249
 Azevedo, P., 563, 585
 al-‘Aziz, 92
 Bā Makhrama, 328, 531, 533
 Babinger, F., 518
 Bābur, 456, 494
 Bacharach, J. L., 51, 303, 312, 529
 Bacon, Francis, 164
 Bacon, Roger, 152, 163, 167, 637
 Bacus, 28, 265, 500
 Baechler, J., 686
 Badel, P.-Y., 207
 Badr al-Dīn Ḥasan, 526
 Badr al-Jamālī, 306
 Badras, 15
 Badu, 292
 Bahadur, 482
 Bahman Shāh, 244
 Bahram V, 68
 Bahuchet, S., 398
 Baines, J., 618
 Baker, C., 274
 al-Bakrī, 51, 157, 158
 Balādūrī, 39, 51, 60, 111, 135, 408
 Bālaputra, 84, 100
 Balban, 231, 232, 243
 al-Bālīsī, 314, 315
 Balitung, 97, 101
 Ballahar, 81
 Balter, M., 636
 Banākātī, 163
 Bang, P. F., 640
 Banū al-Khuṭabā’ family, 326
 Banu Muzalliq family, 523
 Bao Ho, 26
 Baranī, 241, 242, 243, 245, 246
 Barbaro, J., 516
 Barbier de Meynard, Charles, 72
 Barbosa, Duarte, 198, 246, 250, 364, 410, 471, 480, 485, 486, 487, 489, 490–491, 494, 540, 541, 547, 548, 549, 551, 574, 599, 614
 Barendse, R. J., 159, 450, 480, 516, 654, 660, 682
 Barfield, T., 666
 Barkey, K., 617
 Barmecid family, 45
 Barnavi, E., 445
 Barnes, R., 278
 Barqūq, 314, 316, 676
 Barrau, J., 399, 415
 Barreto de Rezende, Pedro, 540
 Barreto, Francisco, 604
 Barrett Jones, A. M., 97
 Barros, João de, 119, 342, 344, 345, 346, 347, 350, 408, 502, 541, 543, 544, 545, 548, 549, 552, 574, 575, 603, 607, 610, 611, 612
 Barsbāy, 314, 447, 456, 523, 524, 525, 526, 528, 529
 Baschet, J., 453
 Basham, A. L., 122, 225, 675
 Basil I (Byzantine emperor), 14
 Basil II (Byzantine emperor), 14, 154
 Basmil, 23
 Basu, H., 479
 al-Battānī, 66
 Battista Alberti, Leon, 442
 Battistini, R., 139, 373, 389, 390
 Bausani, A., 58, 70, 282, 290, 291, 294
 Bawdwin, 237
 Bayazid I, 297
 Bayazid II, 449
 Baybars, 163, 177, 309, 310, 311, 312
 Baybars al-Manṣūrī, 241

- Bayly, C. A., 482, 487, 488, 556,
 677, 682, 689
 al-Baytār, 168
 Beach, D., 337
 Beaujard, P., 330, 349, 366, 372,
 384, 385, 397, 398, 399, 400, 402,
 405, 406, 407, 411, 416, 426, 429,
 566, 576, 587, 588, 589, 590, 592,
 594, 596, 619, 625, 647, 653, 654
 Beaulieu, Augustin de, 498, 503
 Beckwith, L., 7, 45, 66, 627, 671
 Behaim, Martin, 384, 446
 Bellini, Gentile, 450
 Bellwood, P., 265
 Belrose-Huygues, V., 562
 Benjamin, J., 107
 Benjamin of Tudela, 155, 225, 236,
 281, 283, 299, 309
 Bentley, J. H., 25, 30, 31, 602, 629,
 656, 682
 Berger, L., 638
 Bergère, M.-C., 192
 Berke, 289, 310
 Berlinghieri, Francisco, 450
 Berman, H., 152
 Bernard, V., 319
 Berner, K. S., 15, 300, 646
 Berthier, H., 576
 Berthold Schwarz (Berthold the
 Black), 163
 Bertrand, R., 446
 Bhaskara Acary, 600
 Bhima I, 217
 Bhoja, 72, 76, 77, 219
 Bhuvanaikabahu I, 240
 Bianconi, G., 134
 Bianji, 29
 Bianquis, T., 66, 68, 70, 149, 281,
 299, 300, 310, 316, 517
 Biardeau, M., 416
 Bihzad, 516
 Bilal, 47
 Bilāl ben Jarīr, 304, 318
 Bimaro, 563, 614, 615
 Biraben, J. N., 434, 446
 Birkeli, E., 550, 588
 al-Birūnī, 60, 77, 112, 134, 136, 218,
 229, 284, 296, 302, 332, 339, 353,
 354, 355, 380
 Bismarck, Otto von, 630
 Bisson, M. S., 540
 Blanchy, S., 126, 344, 350, 358,
 366, 369, 370, 407, 409, 427, 573,
 591, 595, 596, 597
 Blanton, R., 351, 663
 Blench, R., 398, 413, 623
 Bloch, M., 406, 669, 689
 Bloom, J. M., 46, 76, 164
 Blust, R., 96, 406, 426
 Boccaro, 364
 Bogaert, R., 65
 Bogima, 610, 611
 Boiteau, P., 394, 396, 398, 399, 568
 Boivin, N., 110, 401, 623
 Bokovenko, N. A., 159, 288
 Bolad, 205, 291
 Bond, G., 642, 645
 Boothroyd, N., 169
 Bopearachchi, O., 225, 239
 Borhān eddīn alcāzerūny, 209
 Boris I (king of Bulgaria), 14
 Borsch, S. J., 316
 Boserup, E., 150, 453, 634, 640,
 642, 650, 683
 Bosman, W., 600
 Bosworth, A., 13, 156, 159, 164, 173,
 288, 630, 645, 667
 Bosworth, C. E., 394, 590
 Boucheron, P., 175, 436, 442, 501,
 506, 522, 605, 682
 Bouchon, G., 82, 172, 175, 221, 246,
 247, 441, 443, 453, 455, 479, 482,
 485, 487, 489, 490, 492, 494,
 504, 517, 574, 603, 677
 Boulnois, L., 22, 31, 35, 39, 44, 45,
 207, 208, 290
 Bourdillon, M., 588
 Boyer, R., 15
 Brady, T. A., 433
 Bracciolini, P., 433
 Brahe, Tycho, 200
 Brahma (deity), 100
 Brahmagupta, 55, 73
 Bramoullé, D., 300
 Bras Braiāo, 575
 Braudel, F., 50, 152, 153, 165, 166,
 171, 192, 194, 242, 281, 303, 311,
 435, 436, 437, 439, 440, 442, 443,
 453, 460, 504, 517, 603, 604, 617,
 622, 629, 633, 634, 636, 637,
 640, 641, 643, 645, 666, 672,
 673, 677, 679, 680, 681, 685
 Braun, O., 661
 Braun, Samuel, 250
 Bray, F., 23, 178, 179, 190, 191,
 203, 472
 Brenner, R., 681
 Bresc, H., 50, 51
 Bresson, A., 625, 672, 675
 Bresson, F., 672
 Breton, S., 657, 669, 689
 Brihadeshvara (deity), 222
 Bronson, R., 418
 Brook, T., 213, 459, 472, 474, 475
 Brooke, J. L., 14, 160, 174, 619,
 642, 646
 Brotton, J., 438, 445, 450, 602
 Brown, H., 120
 Brown, N., 10, 12, 42, 62, 69, 147,
 174, 280, 285, 288, 299, 300, 646
 Brown, R. L., 89
 Brown, W. H., 118, 354
 Browning, 154
 Bruhns, 152, 171, 672
 Buckley Ebrey, P., 212
 Bruto Chambanga, 404, 412
 Buddha, 76, 89, 91, 181, 462, 589
 Bukka I, 245
 al-Būnī, 593
 Büntgen, U., 4
 Burbank, J., 154
 Burke, E., 16, 55, 66, 166, 690
 Burckardt, J., 444
 Burhān al-Dīn al-Mahallī, 316, 676
 Buridan, J., 167
 Burke, E., 66, 166, 690
 Burkill, I. H., 398
 Burnell, A. C., 600
 Burney, D. A., 138, 140, 143, 373,
 386, 578
 Burroughs, W. J., 12, 160, 174,
 435, 646
 Burton-Page, 365, 493
 Butzer, K. W., 47, 69, 147
 Buxton, I., 152
 Buzurg Ibn Sahriyār, 60
 Byres, T. J., 222
 Caboto, Giovanni (John
 Cabot), 455
 Cabral, Pedro Alvares, 446, 491,
 539, 574, 603
 Ca' da Mosto, Alvise da, 440,
 441, 530
 Cahen, C., 311, 322
 Cai Wenji, Illustration XIII
 Calabrese, J. A., 334
 Calanca, P., 213, 214, 470
 Callet, F., 125, 394, 395, 406, 414,
 415, 421, 426, 427, 428, 601
 Calmard, J., 281, 290, 294, 295,
 296, 518

- Calvin, John, 445, 670
 Cana, Malemo, 454
 Cantino, Alberto,
 Cão, Diogo, 454
 Capdepu, V., 307
 Capogrossi, L., 672
 Capredon, M., 598
 Carpeau du Saussay, 408
 Carroué, 453
 Carswell, J., 82, 87, 91, 208, 284
 Carvalho, V., 613
 Casale, G., 479
 Casparis, J. G. de, 97, 98, 100,
 423, 426
 Casson, L., 672
 Castanheda, 611, 613
 Castro, João de, 541
 Catat, L., 395
 Chaffee, J., 195
 Chakravarti, R., 60, 70, 73, 77, 79,
 82, 83, 84, 86, 94, 219, 220, 223,
 224, 225, 226, 235, 237, 238, 239,
 247, 258, 283, 284, 304, 483,
 493, 531
 Chami, F. A., 106, 107, 113, 120,
 121, 128, 129, 131
 Champakalakshmi, R., 85, 86,
 222, 223, 224, 225, 226, 234, 236,
 484, 488
 Chandler, T., 10, 156, 159, 164, 645
 Chandrabhānu, 267
 Chang, K. C., 618
 Chanudet, C., 128, 129, 352, 367,
 368, 369
 Chapelier, L. A., 399
 Charle, C., 166, 444, 445
 Charlemagne, 7, 8, 15, 17
 Charles the Simple, 15
 Charles V (king of France), 172
 Charles VII (king of France), 437
 Charles-Dominique, P., 309
 Chase-Dunn, C., 107, 157, 618,
 628, 630, 633, 634, 635, 636, 642,
 644, 645, 650, 651, 660, 661,
 663, 668, 672
 Chattopadhyaya, D. P., 79,
 217, 235
 Chaudhuri, K. N., 12, 51, 59, 62,
 107, 159, 203, 218, 219, 251, 285,
 301, 308, 317, 605, 638, 675, 682
 Chaudhury, S., 495
 Chaunu, P., 455
 Che Bong Nga, 274
 Cheddadi, A., 525
 Cheikh Farid, 477
 Chen, X., 624, 643
 Chen Cheng, 461
 Chen Dasheng, 185, 199, 208,
 210, 267
 Chen Zuyi, 496
 Chernykh, E. N., 642
 Chew, S. C., 202, 642
 Cheynet, V., 690
 Chi Wu Wen, 163
 Childs, S. T., 115, 334
 Chittick, N., 119, 121, 127, 128, 129,
 139, 142, 339, 341, 342, 343, 345,
 348, 354, 361, 363, 364, 368, 382,
 535, 537
 Chrétien, J.-P., 365, 539
 Christian, D., 10, 626
 Christiansen, B., 646
 Christiansen, J., 183
 Chrysoloras, Manuel, 445
 Chulata (Fulata), 471
 Cicero, 642
 Citton, Y., 189, 687
 Civa-Buddha, 271
 Clarence-Smith, G., 323, 487, 541
 Clark, H. R., 12, 20, 26, 185
 Clarke, J., 687
 Clavijo, Ruy Gonzales de, 297,
 515, 520
 Clement V, 151
 Clot, A., 525
 Coedès, G., 91, 97, 99, 100, 226,
 227, 254, 255, 256, 258, 259, 262,
 264, 269, 271, 277, 379
 Cœur, Jacques, 437
 Coleman, J., 660
 Colledge, S., 636
 Collet, O. J. A., 588
 Columbus, Christopher, 433, 453,
 457, 460, 602
 Columella, 436
 Condominas, G., 421
 Condorcet, Marquis de, 688
 Coningham, R., 87, 111
 Constantine IX (Byzantine
 emperor), 154
 Constantine the African, 15
 Conti, N. dei, 295, 443, 445, 447,
 479, 511, 515
 Cook, E. R., 147, 160, 300, 646
 Cooper, F., 154
 Copernicus, 296, 439, 455
 Coquery-Vidrovitch, C., 52, 158,
 337, 440, 545, 682
 Corbin, A., 671
 Corby, M., 564
 Cornelius (pirate), 141, 586
 Correia, Gaspar, 164, 237, 479, 535,
 548, 550, 612
 Cortes, Hernando, 455, 457
 Cortesão, 470, 471, 479, 480, 485,
 491, 494, 496, 497, 498, 500,
 501, 502, 503, 504, 505, 506, 507,
 508, 510, 511, 513, 520, 533, 537,
 552, 574, 602, 603
 Corvino, Giovanni di Monte, 293
 Cosa, Juan de la, 384, 610
 Cosmas Indicopleustes, 39, 218,
 247, 379
 Costin, C. C., 109, 655
 Cotrim, Fernão, 546
 Coulaud, D., 406
 Couto, Diogo de, 543, 560, 562,
 575, 607, 612, 614
 Covilham/Covilhã, Pero de,
 537, 602
 Craddock, P. T., 49, 87, 163
 Cresques, Abraham, 172
 Crone, P., 42, 51
 Crowley, T. J., 160, 174, 435,
 646
 Crowther, A., 113, 114
 Crumley, C., 633
 Cunha, Tristão da, 553, 575, 584,
 610, 611, 612, 613
 Curtin, P. D., 301, 656, 682
 Cyril (ninth-cent. evangelist), 14
 Czegledy, K., 9
 D'Ailly, Pierre, 433, 453, 602
 D'Almeida, R. P., 408
 D'Anania, Laurent, 408
 D'Arrigo, R., 160, 288
 D'Aurillac, Gerbert, 151
 Da Costa, Paolo Rodrigues,
 558, 587
 Dā'ūd bin Sulaymān, 360, 366
 Dahl, O. C., 137, 405, 411, 412,
 422, 577
 Dahle, L., 421
 Dai Zhi, 202
 Damais, L.-C., 98, 99, 104,
 416, 423
 Damir, B. A., 124, 366, 559
 Dandin, 219
 Dandouau, A., 393, 394
 Daniel (prophet), 594
 Dapunta Selendra, 97

- Darafely (legendary figure), 394, 395, 414
 Darafify (legendary figure), 393, 394, 395, 414
 Darrag, A., 525
 Das Gupta, A., 493
 Davidson, B., 603
 Debret, M., 643
 Decary, R., 425, 587
 Decker, M., 47
 Délivré, A., 413, 578, 581
 Deloche, J., 219, 220, 479
 Delord, R., 407, 587
 Denemark, R. A., 15
 Deng, G., 19, 20, 24, 29, 31, 33, 36, 37, 39, 40, 180, 182, 184, 186, 187, 188, 190, 193, 194, 195, 199, 200, 201, 202, 203, 204, 206, 208, 209, 210, 212, 215, 460, 462, 464, 469, 470, 471, 625, 674, 686
 Denoix, S., 153, 677
 Derideaux, P., 38
 Deschamps, H., 138, 139, 592
 Détrie, M., 169
 Devapāla, 83, 84, 237
 Devaraya II, 483, 484, 486, 489
 Devendra, S., 87
 Devic, L. M., 133, 134, 382
 Devisse, J., 51, 52, 53, 54, 113, 133, 158, 159, 210, 312, 313, 330, 441, 462, 530, 531
 Dewar, R. E., 131, 139, 142, 143, 371, 373, 374, 376, 378, 385, 386, 387, 388, 390, 391, 556, 566, 568, 578, 580, 581, 584, 648
 Deyell, J., 13, 73, 77, 79, 149, 216, 217, 229, 230, 232, 237, 245, 458
 Dez, J., 403, 426, 576, 577, 592, 593
 Dharmapāla, 83, 84, 89
 Dharmavamsa, 260
 Dhavalikar, M. K., 244, 449
 Di Cosmo, N., 10, 13, 159, 160, 298, 517, 643, 667
 Diamō Germas, 410
 Diamond, J., 181, 630, 634, 635, 639, 650
 Dias, Bartolomeu, 454, 457, 602
 Dias, Diogo, 610
 Dick-Read, R., 132
 Digby, S., 72, 173, 196, 198, 205, 208, 210, 227, 239, 243, 245, 246, 247, 248, 239, 293, 295, 302, 306, 356, 365, 461, 469, 490, 492, 524, 531, 606, 609
 Dimašqī, 380, 381, 382
 Dīnawārī, 39
 Dinis, A., 488
 Dīpankara Srijñāna, 90
 Divākara (Ti-houa-k'ie-lo), 262
 Djālesty, 365
 Djebbar, 66, 67, 151, 189, 296
 Domenichini, J.-P., 132, 416, 578, 586
 Domenichini-Ramiaramanana, B., 132, 139, 394, 426, 429, 587
 Donatello, 445
 Dorn, H., 150, 151, 167, 185, 189, 203, 296, 455, 687
 Drège, J.-P., 29, 39, 297
 Drury, R., 411, 585
 Du Huan, 38, 39, 45, 118
 Duan Chengshi, 38, 110, 118
 Duarte, R. T., 332, 346, 364
 Dubois, H. M., 425
 Ducatez, 113, 133, 164, 321, 382
 Ducène, J.-C., 60, 133, 354
 Dumont, L., 54, 670, 687, 689
 Duplantier, J. M., 375
 Dupoizat, M.-F., 503, 510, 512
 Durand-Dastès, F., 666
 Dussubieux, L., 26, 49, 87, 90, 92, 114, 258, 259, 335, 375, 498
 Dutta, K. T., 93
 Duyvendak, J. J. L., 118
 Dyen, I., 407
 Edens, C., 630, 639, 663, 673
 Eggert, K., 372
 Ehret, C., 341
 Ekblom, A., 116
 Ekholm, Ekholm-Friedman, K., 108, 332, 337, 360, 454, 542, 543, 550, 638, 641, 652, 653, 654, 659, 662
 Elisseff, N., 45, 55, 58
 Ellis, S., 560, 562, 563
 Elvin, M., 20, 21, 23, 26, 27, 30, 31, 32, 35, 148, 156, 178, 179, 180, 182, 188, 190, 191, 192, 194, 195, 202, 203, 204, 234, 458, 468, 472, 473, 475, 640, 662, 684, 687
 Emmanuel, A., 661
 Emphoux, J.-P., 389, 584
 Epstein, S. R., 438, 442, 683
 Eric the Red, 15
 Esen, 468
 Esper, J., 15, 157, 160, 169, 174, 435, 646
 Euclid, 65, 687
 Eugene IV, 433
 Eymard-Duvernay, F., 657
 Fagan, B. M., 12, 69, 173, 361, 540
 Fahd, T., 593, 594
 Fakhr al-Dīn al-Tawrīzī, 525, 526
 Fanony, F., 142, 143, 378, 413, 583
 al-Faqīh, 47
 al-Farabī, 66
 Faraj ibn Barqūq, 522, 523
 al-Fariqī, Jamāl al-Dīn, 326
 al-Fāriqī, Šaraf al-Dīn, 326
 al-Fārisī, 296
 al-Fāsī, 328, 524
 Farris, W. W., 199
 Fāṭima (daughter of the Prophet), 43, 405
 Fatraipatanana (legendary figure), 395
 Faublée, J., 403, 425, 577
 Fauvelle-Aymar, F.-X., 38, 51, 52, 53, 157, 159, 162, 168, 173, 209, 306, 335, 359, 360, 361, 441, 451, 659
 Favre, P., 426
 Faxian, 75
 Fayum family, 445
 al-Fazārī, Ibrāhīm, 55
 al-Fazārī, Muhammad, 51, 55
 Fei Xin, 467
 Fenn, T. R., 52
 Ferdinand of Aragon, 453
 Ferishta, 216, 230, 232, 484
 Fernandes, A., 541, 544
 Fernandes, V., 574
 Ferrand, G., 21, 37, 39, 60, 61, 83, 88, 90, 99, 132, 133, 134, 135, 136, 137, 218, 279, 347, 355, 368, 379, 381, 382, 402, 403, 404, 405, 410, 413, 488, 569, 574, 585, 590, 593, 599
 Ferreira, Gil, 413
 Ferreira Fogaça, Pedro, 546, 553, 608
 Ferreira, Pedro, 549
 Fibonacci, 151
 Figueira, Luis, 613
 Filesi, T., 62, 187, 196, 355, 463, 467, 469, 552
 Filliozat, J., 594

- Findlay, R., 8, 15, 16, 46, 51, 52, 68, 169, 172, 174, 176, 181, 182, 186, 190, 193, 300, 316, 438, 439, 443, 444, 446, 450, 451, 510, 522, 523, 529, 602, 608
- Finley, R., 687
- Firdawsī, 229
- Firūz Shāh, 231, 241, 244, 245, 365
- Fischel, R., 297
- Fischel, W., 65
- Fitzgerald-Huber, 624
- Flacourt, E. de, 373, 384, 393, 396, 397, 398, 403, 404, 405, 409, 410, 411, 412, 413, 425, 567, 576, 582, 583, 590, 591, 592, 593, 595, 597, 599, 600, 601, 610
- Flecker, M., 27, 261
- Fleisher, J. B., 107, 110, 112, 118, 121, 127, 128, 157, 339, 341, 342, 344, 346, 347, 353, 357, 358, 360, 362, 364, 535, 539, 541, 546, 549, 658
- Flynn, D. O., 474, 681, 682, 685
- Folch, D., 463
- Fo-lian, 199
- Forslund, A.-L., 112, 119, 128, 129
- Foucault, M., 637
- Fra Mauro, 384, 445
- Francesco di Giorgio Martini, 286
- Frank, A. G., 147, 159, 184, 251, 295, 455, 475, 494, 510, 512, 609, 620, 624, 628, 633, 634, 635, 639, 644, 645, 650, 657, 661, 665, 672, 673, 680, 681, 682, 684, 685
- Frederick Barbarossa, 154, 166
- Frederick II, 53, 166, 167, 170, 285
- Freeman-Grenville, G. S. P., 90, 111, 113, 133, 137, 344, 346, 349, 364, 367, 383, 535, 542, 543, 544, 547, 548, 549, 551, 552, 577, 603
- Friedman, F., 641
- Friedman, J., 108, 543, 627, 639, 641, 651, 653, 662, 663
- Friedman, M. A., 157, 220, 284, 300, 302, 303, 304, 305, 306
- Frisius, Gemma, 200
- Froberville, B. H. de, 397, 426
- Frois, Luis, 548
- Fu'ad-Sayyed, A., 149, 299, 301
- Fugger family, 443, 603
- Fuller, D. Q., 623
- Fuson, R. H., 433
- Gaborieau, M., 11, 80, 81, 168, 170, 205, 230, 231, 234, 237, 238, 241, 242, 244, 245, 270, 365, 477, 481, 482, 484, 497, 598, 673, 677
- Gajah Mada, 277
- Galaty, M. L., 337, 657
- Galen, 296
- Galland, A., 65
- Gama, Vasco da, 331, 453, 454, 457, 547, 602, 603, 609
- Ganapatideva, 219, 233
- Ganesa, 89
- Gang Deng, 39
- Gaozong, 23, 190, 199
- Gaozu, 19
- Garcin, J.-C., 6, 50, 61, 70, 154, 281, 282, 293, 299, 308, 309, 310, 311, 312, 313, 316, 439, 522, 524, 525, 528, 529
- Garlake, P. S., 336, 338, 362, 535, 536
- Garnsey, P., 640
- Garuda (deity), 134
- Gasche, H., 619
- Gates, H., 22
- Gaudebout, P., 377, 416, 564, 565, 566
- Gaudefroy-Demombynes, M., 50
- Gautier Dalché, P., 445
- Gaykhatu, 290, 291, 292
- Geber, *see* Jābir ibn Ḥayyān
- Geertz, C., 576, 594
- Genet, J.-P., 686
- Geng, D., 33
- Genghis Khān, 160–161, 175, 176, 177, 232, 288, 297, 643, 660
- Geofarere (legendary figure), 413, 610
- Geoffroy, E., 597
- George II, 53
- George of Trebizond, 450
- Gerard of Cremona, 55, 151
- Germanus, Henricus Martellus, 602
- Germanus, Nicolaus, 446
- Gernet, J., 19, 20, 22, 23, 24, 26, 29, 30, 31, 32, 33, 34, 35, 40, 46, 163, 170, 178, 179, 180, 181, 182, 184, 185, 186, 187, 188, 189, 190, 191, 193, 194, 195, 201, 202, 205, 213, 215, 286, 291, 293, 455, 458, 459, 462, 463, 469, 471, 472, 473, 683
- Gevrey, A., 124
- al-Gharnāṭī, 306, 313
- al-Ghazālī, 57, 150, 296
- Ghāzān, 177, 205, 292, 294, 312
- Ghāzī Tughlūq, 243
- Ghiberti, L., 444
- Gil, M., 58
- Gills, B. K., 159, 475, 494, 620, 624, 628, 639, 644, 645, 672, 673, 681, 682
- Giovanni dal Piano dei Carpini, 289
- Giraldez, A., 682
- Giralt Romeu, S., 148, 174, 288, 434, 472
- Girolamo di San Stefano, 531
- Glover, I. C., 27, 28, 62, 81, 86, 87, 89, 92, 94, 96, 104, 130, 132, 629
- Go-Daigo, 214
- Godelier, M., 56, 330
- Godley, D., 174, 269
- Goitein, S. D., 45, 56, 57, 58, 157, 159, 184, 218, 219, 220, 284, 300, 301, 302, 303, 304, 305, 306, 308, 318, 671, 682
- Goldberg, E., 56, 303
- Golden, P. B., 23
- Goldstone, J., 7, 66, 152, 195, 438, 455, 602, 634, 638, 641, 665, 672, 685, 687, 688
- Gomes, F., 439
- Gomes, João, 563
- Gomes d'Abreu, João, 610, 613, 614
- Gomes de Abreu, Vasco, 457
- Gonda, J., 410
- Gondonneau, A., 52
- Gong, G. F., 174
- Gongzhen, 490
- Gonneau, P., 451
- Goodman, 126, 429
- Goody, J., 8, 15, 55, 153, 166, 171, 435, 442, 483, 488, 515, 625, 670, 672, 680, 681, 685, 687
- Gordon, S., 187
- Goris, P., 417, 577
- Goucher, C., 34, 191, 192
- Gourou, P., 427, 512
- Govinda III, 80
- Graeber, D., 619
- Graefe, E., 593
- Grandidier, A., 141, 378, 393, 394, 404, 408, 569, 584, 586, 610, 613
- Grandidier, G., 393, 394
- Grataloup, C., 8, 434, 651, 666, 671, 682

- Gratian, 152
 Gratuze, B., 9
 Gray, A., 122, 574
 Gregory VII, 152
 Grévin, B., 280, 316, 516
 Griffin, W., 143, 387, 568
 Grosseteste, R., 167
 Grove, J. M., 14, 15, 646
 Grove, R. H., 174, 435
 Gruzinski, S., 433
 Grynaeus, S., 211
 Guerra, M. F., 52
 Guéry, A., 672
 Gueunier, N., 399, 416, 422, 423, 553
 Guichard, P., 48, 50, 51, 69, 70, 290, 530
 Guillain, C., 560
 Guillot, C., 258, 259, 266, 269, 498
 Guinguimaro, 561, 562, 563, 615
 Gunawardana, R. A. L. H., 87
 Guo Xi, 188
 Gupta, A. K., 643
 Guste Pate, 502
 Gutenberg, J. G., 163, 438
 Guthrie, M., 396, 398
 Gutman, P., 269
 Güyük, 289

 Haaland, R., 117
 Haarmann, U., 310, 311, 312
 Ḥabash al-Ḥāsib, 66
 Habib ben Abi Ubaida, 51
 Habib, I., 57, 76, 163, 234, 236, 241, 242, 245, 246, 477, 479, 480
 Hafez, 296
 Ḥāfiẓ-i Abru, 292
 Haider, N., 248
 Haji Rukh, 209
 al-Ḥajjāj bin Matār, 65
 al-Hakam, 66
 Hakam II, 16
 Hakansson, T., 110, 112, 115, 329, 331, 332, 340, 351, 538, 539, 544, 549, 551, 607
 al-Hakim, 285
 Halfon, 318
 Halfon ha-Levi, 303
 Hall, D. G. E., 262
 Hall, K. R., 88, 92, 97, 101, 108, 185, 218, 222, 223, 224, 226, 228, 235, 238, 240, 253, 254, 256, 257, 262, 264, 268, 270, 273, 274, 276, 277, 278, 418, 420, 484, 501, 503, 513, 670
 Hall, T. D., 157, 628, 635, 636, 644, 645, 651, 658, 660, 661, 663, 668, 672
 Hameed, S., 174
 Hamés, C., 108, 551, 593, 594
 Ḥamīd ud-Dīn Multanī, 242
 Hamidullah, M., 39
 Hammurabi, 623
 Hamonic, G., 407, 500, 508
 Han Yu, 35
 Hanisch, E. O. M., 116
 Hannan, M., 396
 Hansen, M. H., 52, 111, 166, 442, 618, 637, 645, 684
 Harboun, H., 155, 225, 282, 283, 299
 Hardy-Guilbert, C., 319, 521
 Hargreaves, James, 687
 Harihara II, 245
 al-Ḥarīrī, 164, 200, 281
 Harsha, 25, 73, 75–79
 Hartwell, R., 181
 Ḥārūn al-Rashīd, 33, 45
 Hasan, H., 24
 Hasan ben Bundar, 303, 318
 Ḥasan bin ‘Ajlān, 523, 532
 Ḥasan bin ‘Alī, 350
 Hasan bin Husain, 551
 Ḥasan bin Sulaymān, 359, 360, 361, 363
 Ḥasan ibn ‘Alī, 344, 345
 Ḥasan ibn Tālūt, 352, 361
 Hasan-Japhet ben Bundar, 302
 al-Hassan, A. Y., 287, 294
 Hassan, F. A., 299, 300
 Hassani (fictional character), 559
 Hawkes, J., 120, 121, 123, 127, 129
 Hawkins, C. W., 499
 Hayami, A., 489
 Hébert, J.-C., 137, 142, 368, 379, 400, 401, 402, 404, 408, 410, 411, 412, 414, 416, 422, 423, 424, 425, 553, 560, 561, 569, 570, 571, 579, 580, 586, 590, 591, 592, 595, 599, 600, 601, 611, 612
 Heck, G. W., 51
 Heers, J., 437
 Heesterman, J. C., 95
 Heine-Geldern, R., 100, 588
 Heitzman, J., 75, 85, 222, 223, 224, 239, 487, 603
 Helm, R., 107, 114
 Helms, M. W., 27, 108, 109, 313, 461, 551, 653, 655
 Heng Thiam Soon, 198
 Henry II (king of England), 151
 Henry III (king of England), 153
 Henry IV (Holy Roman Emperor), 152
 Henry VII (king of England), 455
 Henry the Navigator, 439, 456, 602
 Heraclius, 10, 43
 Herbert, E. W., 115, 334
 Héritier, F., 595
 Herr, M., 211
 Heurtebize, G., 389, 583
 Heusch, L. de, 9, 415, 588, 595
 Hiebert, F. T., 620
 Higham, C., 94, 95, 96, 624
 Hinnebusch, T. J., 106, 107, 120, 124, 384, 396, 397, 400
 Hintze, H., 672, 679
 Hirsch, B., 159, 209, 359, 439, 440, 451, 659
 Hirth, F., 24, 88, 103, 105, 118, 178, 183, 184, 196, 197, 198, 229, 252, 254, 262, 264, 265, 266, 319, 333, 339, 340, 347, 385
 Hisham, 25
 Ho, C.-M., 27, 62
 Hobson, J. M., 3, 7, 43, 150, 163, 164, 173, 181, 188, 193, 200, 206, 281, 435, 438, 439, 451, 454, 455, 467, 468, 471, 604, 644, 680, 682, 685, 687, 688
 Hocart, A. M., 691
 Hochstetter, F. von, 373
 Hodgson, M. G. S., 50, 282, 450, 516, 517
 Hogendorn, J., 60, 159, 250, 440
 Homem, Fernandes, 546, 607
 Honeychurch, W., 160, 161
 Hong Bao, 463
 Hongwu, 175, 212–214, 434, 458, 459, 461, 470, 473, 475, 496
 Hongxi, 463
 Hornborg, A., 633
 Hornell, J., 99, 135, 382
 Horton, M., 59, 60, 106, 108, 109, 110, 111, 112, 113, 114, 115, 117, 118, 119, 120, 121, 123, 124, 127, 128, 131, 136, 138, 142, 302, 329, 330, 332, 333, 334, 336, 337, 338, 339, 340, 341, 342, 344, 345, 346, 347, 348, 349, 350, 351, 352, 354, 355, 356, 357, 358, 360, 363, 365, 367,

- 368, 370, 377, 535, 537, 538, 539,
540, 549, 551, 653, 654, 655
Hosokawa family, 470
Hou Xian, 461
Hourani, G. F., 39, 43, 62, 109,
110, 208, 379, 605
Houtman, F. de, 422, 429
Houyuan Lu, 34, 185
Hovhannès (Armenian
merchant), 303
Hrbek, I., 303
Hu, F. S., 642
Huang Chao, 16, 36
Hudson, B., 269
Hudson, M., 620, 621, 622, 683
Huff, T. E., 150, 151, 152, 153, 285,
286, 296
Huffman, T. N., 116, 117, 334, 335,
336, 337, 338, 388, 539, 596
Hugget, J. W., 8
Hughes, J. D., 642
Hughes, P. S., 152
Huichao, 24, 38
Huilin, 37
Huining, 99
Huizong, 188, 190
Hülāgū, 161, 177, 289, 290, 291,
307, 308, 310
Hunain ibn Ishāq, 65
Hurles, M. E., 392
Hurvitz, D., 392, 393
Hus, Jan, 445
Husain Bāiqarā, 516
Ḥusayn (brother of Yemeni
sultan), 532
Ḥusayn (caliph), 6, 17, 43
Ḥusayn (captain), 363
Ḥusayn (sultan of Shiraz), 344
Huttich, Johann, 211

Ibn Abd al-Hakam, 51
Ibn ‘Abd al-Majīd, 326
Ibn ‘Allan al-Yahūdī, 65
Ibn al-Athīr, 288, 318
Ibn al-Balkhi, 70
Ibn Battūta, 111, 158, 159, 168, 169,
187, 205, 206, 207, 208, 209, 210,
211, 212, 235, 243, 244, 245, 246,
247, 248, 250, 266, 268, 294, 295,
313, 315, 322, 324, 325, 339, 351,
352, 353, 359, 360, 361, 364, 365,
402, 448, 492, 497, 498, 508, 551,
605, 606, 659, 678, 680
Ibn al-Bayṭār, 294, 403

Ibn Butlān, 332
Ibn al-Dayba’, 531, 532
Ibn Fadlān, 10
Ibn al-Faqīh, 53, 58, 61, 133
Ibn Fātima, 380
Ibn Ḥajar, 310, 315
Ibn Ḥawqal, 51–54, 56, 59, 79, 114,
135, 318, 380
Ibn al-Haytham, 296
Ibn Hilis, 326
Ibn Iyās, 531
Ibn Jubayr, 284, 308, 309, 322
Ibn Jumay’, 327, 673
Ibn Khaldūn, 54, 163, 313, 316, 360,
525, 634, 664
Ibn Khurdādbēh, 9, 48, 60, 61, 64,
65, 79, 80, 82, 87, 88, 100, 134,
380, 589
Ibn Killis, 300
Ibn Lākīs, 132, 133
Ibn Mājid, 164, 347, 379, 383, 442,
494, 506, 526, 546, 551, 552, 553,
569, 570, 571, 602, 606
Ibn Mammātī, 309
Ibn Mansūr al-Kūlamī al-
Kārimī, 326
Ibn Mu’nim, 285
Ibn al-Mujāwir, 283, 284, 309, 317,
320, 321, 322, 325, 333, 352, 371,
379, 381, 382, 648
Ibn al-Muzalliq, 526
Ibn al-Nafīs, 296
Ibn Qudāma, 55
Ibn Rūbak, 531
Ibn Rushd, *see* Averroes (Ibn
Rushd)
Ibn Rusteh, 77, 134, 136, 139
Ibn Sa’id, 133, 134, 158, 351, 354, 355,
374, 379, 380, 381, 544
Ibn ash-Shāṭir, 296, 439
Ibn Sīnā, *see* Avicenna (Ibn Sīnā)
Ibn Ṭāhīr, ‘Alī and ‘Amir, 533
Ibn Tajribirdī, 315
Ibn al-Unf, 531
Ibn al-Wardī, 354
Ibn Ziyād, 67, 318
Ibonia (legendary figure), 417, 421
Ibrāhīm (merchant), 524
Idrīsī, 54, 111, 117, 135, 136, 137, 140,
157, 219, 262, 263, 313, 318, 332,
333, 342, 346, 349, 351, 353, 354,
355, 356, 367–368, 378, 379, 380,
381, 410, 553
Iltutmish, 176, 231, 232

Inalcik, H., 50, 172, 443, 517
Indra III, 80
Indrawooth, P., 94, 95
Ingrams, W. H., 356
Innocent IV (pope), 167, 289
Insoll, T., 52, 54, 107, 109,
110, 114, 117, 120, 125,
159, 329, 330, 334, 337, 341, 342,
348, 349, 359, 360, 361, 365, 479,
540, 597
Isaac II, 155
Isabella of Castile, 453
Ishāq, 63, 90
Ishāq b. Makhlūf, 303
Ishoyahb III, 63
Iskandar (fictional character), 405
Ismā’il (Seventh Imam), 69
Ismā’il Shāh, 457, 518, 519
Iṣṭakhri, 59, 114, 282
Ivan III, 451

Jābir ibn Ḥayyān, 46, 66, 152
Jacob of Ancona, 208
Jacob, M., 687
Jacomy, B., 43, 181, 286
Jacq-Hergoualc’h, M., 23, 27, 36,
84, 85, 86, 87, 91, 92, 93, 95, 96,
227, 240, 256, 257, 258, 259,
260, 267
Jagadū, 238
Jahan Shāh, 515
al-Jāhīz, 111, 113, 133, 379
Jain, V. K., 217, 226, 235, 238,
239, 676
Jamal al-Dīn, 680
Jamāl al-Dīn Yūsuf, 526
James I (king of England), 306
Jami, 516
Jaqmaq, 528
Jaspers, K., 627
Jawhar, 69
Jayavarman II, 95, 98
Jayavarman VII, 255, 256
al-Jazarī, 168, 286, 287
Jia Sīdao, 202, 638
Jia Xian, 189
Jiadan, 26, 39, 96, 99
Jiajing, 565
Jiang, J., 149, 157, 299, 646
Jianzhen (Ganjin), 26
Jiao Sīdao, 161
Jing Hao, 188
Joannès, F., 626
João I (king of Portugal), 439

- João II (king of Portugal),
 439, 602
 John II (Byzantine emperor), 155
 John (king of England), 153
 John XXII (pope), 167
 John of Montecorvino, 170, 293
 John of Seville, 151
 Johns, A. H., 268, 645
 Johns, J., 271
 Johnson, M., 60, 159, 250, 440
 Jones, E. L., 203
 Jones, P. D., 4, 12, 14, 642, 646
 Jones, R., 160, 630, 671
 Joseph b. Phineas, 64, 675
 Josephus, 667
 Jouannès, C., 347, 379, 382, 383,
 546, 552, 569
 Judah, 219
 Judde de Larivière, C., 437
 Julien, G. H., 423, 591
 Juma, A. M., 107, 111, 117, 118, 119,
 121, 122, 123, 127, 133, 342, 345, 549
 Junker, L. L., 374, 418, 498, 566
 Justinian, 55
 Juvainī, Ata al-Mulk, 289, 290
 Juvainī, Shams ad-Dīn
 Muhammad, 290

 Kabīr, 477
 Kadhi Umari, 370
 Kallinikos, 43
 Kalus, L., 259
 Kamath, S. U., 82
 Kamiki, T., 28, 200, 459, 460
 Kammerer, A., 599, 610, 611, 613
 Kammu, 35
 Kanakasabhai Pillai, V., 135
 Kapilendra, 456, 486
 al-Karajī, 189
 Karashima, N., 85, 86, 225, 226,
 239, 240, 484, 485, 676
 Kardulias, P. N., 331, 657, 659
 Karīm al-Dīn al-Kabīr, 314, 315
 Kauz, R., 469, 520
 Kay, John, 687
 Kaykobad I, 283
 Keall, E. J., 533
 Keir, James, 688
 Ken Angrok, 264
 Kenoyer, J. M., 479
 Kent, R., 393, 558, 563, 584, 585, 587
 Kerlouégan, J., 212, 434, 435, 459,
 460, 461, 467, 468, 470, 472, 473,
 474, 475, 496
 Kertanāgara, 176, 271, 272
 Kervran, M., 60, 113, 121
 Khadija (wife of the Prophet), 43
 Khalaf b. Isaac b. Bundar, 220
 Khalaf Hasan Basrī, 481, 482
 Khālid bin Yazīd, 44
 Khalidi, O., 479
 al-Kharakī, 368
 Khawam, R., 3, 65
 al-Khazrajī, 247, 323, 324, 326, 328
 al-Khidr, 405
 Khizr Khān, 244
 Khoja Iskandar, 508
 Khosrau II, 48, 80
 Khoury, 552, 569
 Khwārezm Shāh, 290
 al-Khwārizmī, 54, 55, 65
 Kidivanga (legendary figure), 394
 Killick, D. J., 117, 333, 354, 368,
 543
 Kim, D., 463
 Kim, H. J., 675
 Kim Sa-hyeong, 196
 al-Kindī, 49, 66, 152
 Kirkman, J., 122, 129, 391, 536,
 549, 566
 al-Kirmānī, 531
 Kleppe, E. J., 339
 Knappert, J., 593
 Kochko, A. de, 401
 Kohl, P. L., 108, 651
 Konczacky, Z. A., 114
 Kopytoff, Y., 652
 Kosambi, D. D., 77
 Koubi, J., 588
 Krahle, R., 27
 Kramers, J. H., 114
 Krishna I, 80
 Krishna III, 80
 Krishnadeva Raya, 477, 604
 Kröger, J., 26
 Kūblai Khān, 161, 176, 203, 205,
 207, 208, 236, 239, 271, 272, 290,
 434, 460
 Kulke, H., 75, 76, 84, 85, 86, 88, 89,
 98, 101, 103, 199, 218, 221, 222,
 225, 226, 227, 228, 231, 233, 235,
 239, 242, 243, 250, 482, 484
 Kulottonga I, 220, 224, 227,
 228, 254
 Kumarapāla, 217, 235
 Kuo Shou-Ching, 200
 Kuran, T., 306
 Kus, S., 386, 580, 581
 Kusimba, C. M., 106, 117, 133, 341,
 344, 356, 357, 365, 549, 550, 552
 Kusimba, S. B., 365
 Kuteiba, 25
 Kuznets, S., 637
 Kwekason, A., 128, 129
 Kwon Kun, 196, 467
 Kyanzhitta, 228, 253
 Labib, S. Y., 39, 55, 56, 58, 65, 70,
 82, 300, 305, 308, 311, 314, 315,
 524, 526
 Lacoste, Y., 677, 683
 Ladislav III (king of
 Hungary), 516
 Laffan, M., 262
 Lakshmī (deity), 229
 Lalibela, 307
 Lalitaditya, 76
 Lallement, M., 660
 Lamb, A., 259
 Landes, D. S., 672
 Langton, S. J., 12
 Latouche, S., 689
 LaViolette, A., 118, 116, 118, 330,
 357, 657
 Le Blanc, V., 425, 574
 Le Bourdieu, F., 401
 Le Hoan Le Dai Hanh, 96
 Le Thanh-tong, 511
 Lebdi, 303, 304, 318
 Leguevel de Lacombe, B.-F.,
 405, 571
 LeGuin, C., 192
 Leif Eriksson, 15
 Leigh, J. S., 408, 411
 Leitão, H. dos Santos, 560
 Leo III (Byzantine emperor),
 9, 10
 Leo V (Byzantine emperor), 9
 Leo VI (Byzantine emperor), 14
 Leo Africanus, 441
 Leong Sau Heng, 93, 259
 Levathes, 468
 Levi ben Gershon, 164
 Levtzion, N., 157, 158
 Lévy, A., 76
 Lewicki, T., 39, 51, 53, 54, 65, 111,
 313, 342
 Lewis, B., 47, 115, 446
 Li Ao, 35
 Li Bo, 23, 147
 Li Cheng, 188
 Li Fang, 23

- Li Jie, 189
 Li Mi, 30
 Li Shimin, 19
 Li Shizhen, 22
 Li Yuan, 19
 Li Zemin, 196, 467
 Liang Ling-Zan, 182
 Liang Wudi, 186
 Liao, D.-K, 185
 Lieberman, V., 12, 27, 28, 30, 36, 74, 147, 148, 152, 159, 160, 162, 174, 179, 184, 199, 200, 202, 212, 215, 217, 221, 230, 231, 241, 243, 253, 254, 255, 256, 257, 269, 271, 272, 273, 274, 275, 276, 277, 341, 433, 438, 450, 470, 473, 474, 478, 481, 484, 493, 498, 501, 509, 510, 511, 512, 633, 635, 639, 640, 641, 642, 643, 644, 645, 657
 Liebnier, H. H., 261
 Lilāvati, 225
 Lin Fu, 215
 Lin Nu, 209
 Lin Xiyuan, 471
 Lingui, 560
 Linton, R., 424
 Liszkowski, H. D., 366
 Liu, L., 108, 351, 624, 643
 Liu, X., 170, 203, 289
 Liu Ha, 36
 Liu Hua, 27
 Liu Ta-hsia, 469
 Liu Xu, 29
 Liu Xuan, 204
 Liu Yingsheng, 239
 Liu Zhiji, 23
 Liverani, M., 627
 Lo, J., 26, 195
 Lobato, Alexandre, 538
 Lobo de Sousa, Balthazar, 560, 614
 Loeb, E. M., 588
 Loiseau, J., 436, 501, 506, 515, 516, 518, 522, 525, 530
 Lombard, D., 37, 38, 63, 64, 97, 98, 99, 100, 101, 103, 104, 136, 168, 185, 196, 199, 208, 210, 247, 258, 259, 260, 263, 264, 267, 268, 271, 272, 276, 278, 417, 428, 446, 483, 496, 498, 500, 501, 502, 503, 504, 507, 511, 513, 575, 588, 670, 676, 677, 679, 682
 Lombard, J., 592
 Lombard, M. (1971, 1972, 2002), 8, 9, 45, 46, 48, 54, 58, 59, 65, 68, 117, 154, 280, 301, 305, 333, 455, 673
 Lopes de Sequeira, Diego, 408, 409–410, 553, 569, 575, 613
 Lopes, Fernão, 455
 Lopes, T., 544
 Lopez, R. S., 152, 170, 172, 210, 316, 472, 529
 Lopo Homem, 164
 Louis IX (king of France), 151, 289, 290, 307, 309
 Louis XI (king of France), 437
 Lovejoy, P. E., 158, 333, 441, 454
 Luang Lianmao, 208
 Luna, K. M. de, 540
 Luquexa, 585
 Lusignan, Pierre de, 315
 Luther, Martin, 167, 445
 Ly Thai-Tong, 257
 Ma Huan, 278, 458, 461, 463, 489, 490, 491, 492, 493, 494, 496, 497, 498, 501, 503, 504, 505, 509, 510, 511, 519, 520, 531, 532, 573, 609, 667
 Ma Wenkuan, 26, 197
 Macaire, P., 393
 MacDonald, D. B., 593
 MacDonald, K. C., 131
 MacEachern, S., 4, 160
 Machado, P., 479
 MacPhee, R. D. E., 386
 Macquarie, J.-L., 395
 Madmūn ben Hasan, 220, 302, 303, 304, 305, 306, 318
 Maduanlin, 184
 Magalhães-Godinho, V., 313, 447, 543, 544, 604, 607, 608
 Magellan, Ferdinand, 569
 Maggs, T., 110
 Magnavita, S., 52, 54, 669
 al-Maḥallī, 328
 al-Maḥallī family, 522
 Maharazi, 369
 al-Mahdī, 45
 Mahdi, W., 37, 88, 91, 97, 98, 99, 104, 132, 211, 400, 415
 Mahefamanana, M., 614
 Mahendravarman, 85
 Mahipāla, 228
 Maḥmūd (sultan), 241, 506, 603
 Maḥmūd Bigarhā, 456, 478
 Maḥmūd Gāwān, 447, 481, 482, 671, 677
 Maḥmūd of Ghazni, 67, 81, 216, 229
 Maḥmūd Shāh, 481
 Mahrūz, 219, 304
 Maimonides, 285
 Makhḷūf ben Mūsā, 302
 al-Makhzumī, 309, 311
 Malekandathil, 608, 609
 Malfante, 441, 530
 Malik Ayāz, 480, 609
 Malik Dastur, 481
 Malik Gopi, 479
 Malik Kāfur, 235, 241
 Malik al-Manṣūr, 310, 535
 Malik Sarwar, 365
 Malik Shāh, 281, 285
 Malik al-Zāhir, 310
 Malthus, T. R., 641
 Malzac, R. P., 601
 Mamallī of Cannanore, 489, 492, 677
 al-Ma'mūn, 45, 46, 65
 Mandeville, Jean de, 172, 519
 Manguin, P.-Y., 11, 13, 39, 89, 91, 94, 98, 101, 103, 104, 128, 136, 164, 186, 187, 211, 219, 259, 262, 263, 265, 276, 277, 292, 418, 421, 478, 479, 504, 508, 573, 574, 575, 662, 679
 Mani, 210
 Manjusrī Boddhisattva, 98
 Mann, M., 637, 672, 683
 Mann, M. E., 4, 12, 14, 157, 160, 169, 642, 646, 647
 Manning, S., 630, 634
 Mansā Musā, 313, 314, 440
 Mansā Uli, 313
 al-Mansūr (Almohad ruler), 150
 al-Mansūr (caliph), 31, 42, 50, 66
 al-Mansūr (general), 16
 Manuel I (Byzantine emperor), 155
 Manuel I (king of Portugal), 455, 553, 609, 611
 Manuel II (Byzantine emperor), 175
 Mao Kun, 463, 465, 467
 Mao Yuanyi, 465, 466, 467
 Mapunda, B. B., 106
 Maqbul Ahmad, S., 21, 40, 60
 al-Maqqarī, 159, 316, 662

- al-Maqrīzī, 303, 308, 313, 327, 328,
 522, 523, 524, 531, 551
 Mar Sapor, 83
 Mara, 181
 Māravarman Kulasekhara, 240
 Maret, P. de, 115, 341, 454
 Margariti, R. E., 220, 301, 303,
 304, 309, 310, 311, 318, 321,
 322, 531
 Māri Jāta II, 360
 Mariano, Luis, 404, 406, 412, 413,
 558, 559, 560, 562, 563, 584–585,
 611, 614–615
 Ma'rib, 345
 Maricourt, Pierre de, 167
 Marignolli, Giovanni dei, 170, 172
 Marinus of Tyre, 42
 Markovits, C., 439, 441, 446, 455,
 478, 483, 485, 486, 493, 505
 Marks, R. B., 160, 190, 213
 Martin, B. G., 353
 Martin, N., 127, 129, 139, 140, 364,
 388, 566
 Martin-Puertas, C., 646
 Martinez-Gros, G., 446, 498, 515,
 516, 518, 522, 670
 Martínón-Torres, M., 335
 Maruvān Sapir Isō, 83
 Marx, Karl, 681, 683
 Massing, A. W., 158
 Mas'ūdī, 7, 36, 38, 39, 54, 59, 60,
 61, 63, 68, 70, 72, 73, 77, 79, 80,
 81, 82, 83, 88, 89, 92, 106, 110, 111,
 112, 114, 115, 117, 119, 124, 133, 134,
 135, 218, 226, 247, 325, 345, 367,
 368, 393, 402, 542, 591, 597
 Massignon, L., 69, 379
 al-Mas'ūd, 321
 Mather, K. A., 401
 Mathew, G., 135, 356, 409
 Matsumoto, K., 373
 Matthews, C., 424
 Matveiev, V., 352
 Maucourant, J., 625, 627, 670
 Mauss, M., 330, 359, 689
 Mayeur, N., 374, 398, 411, 428, 563,
 579–580, 600
 Mayr, Hans, 546, 547, 603
 Mazoyer, M., 8, 150, 164, 436,
 453, 683
 Mbodisy (deity), 398, 399
 McBain, A. Y., 377, 565
 McClellan, J. E., 150, 151, 167, 185,
 189, 203, 296, 455, 687
 McEvedy, C., 160, 630, 671
 McNeill, W., 33, 147, 165, 174, 629,
 633, 642, 667
 Mdjonga, 124
 Meadows, D. H., 690
 Medici family, 437, 445
 Mehmet I (Ottoman emperor),
 449, 516
 Mehmet II (Ottoman emperor),
 449, 450, 516, 517, 518
 Meicun, L., 460
 Meilink-Roelofs, M. A. P., 503
 Meloy, J. L., 524, 525
 Ménard, P., 383
 Menjot, D., 686
 Merah Silu, 268, 310
 Methodius, 14
 Metjen, D., 403
 Mez, A., 58, 70
 Michael Scot, 152
 Michalowski, M., 53
 Micheau, F., 61
 Middleton, J., 106, 108, 109, 112,
 113, 115, 118, 119, 120, 121, 136,
 329, 330, 333, 334, 336, 337, 338,
 339, 340, 342, 344, 345, 346, 347,
 348, 349, 350, 351, 352, 354, 355,
 356, 357, 358, 360, 363, 364, 365,
 535, 538, 540, 547, 549, 550, 653,
 654, 655
 Mieke, G., 160
 Mielants, E., 58, 152, 155, 158, 165,
 166, 171, 173, 178, 193, 195, 201,
 203, 204, 206, 231, 235, 238, 241,
 435, 436, 440, 447, 455, 461, 464,
 468, 469, 472, 483, 523, 525, 530,
 641, 660, 661, 670, 676, 677,
 679, 681, 682, 685, 686
 Migeotte, J., 625
 Mignanelli, P. de, 316
 Mihira Bhoja I, 78
 Mikkelsen, E., 40
 Miksic, J., 263, 264, 271, 277, 420
 Milano, Ducato di, 442
 Mille, A., 578
 Miller, D., 37, 115, 117, 335,
 360, 544
 Millot, J., 377, 564, 565, 566,
 567, 568
 Mills, J. V. G., 278, 458, 461, 462,
 463, 465, 466, 467, 469, 490,
 491, 492, 493, 494, 496, 497, 501,
 503, 505, 509, 511, 520, 531, 599
 Minamoto no Yoritomo, 199
 Minhāj ud-Dīn, 235
 Miquel, A., 124, 134, 197, 544
 Mitchell, P., 115, 116, 336, 360, 361
 Mithkāl, 247
 Mkell, Burham, 366
 Moberg, A., 12, 14, 160, 269, 646
 Mocenigo (doge), 524
 Modelski, G., 645
 al-Mo'izz, 69
 Moin, A., 297
 Mokyr, J., 446, 472, 633, 686,
 687, 688
 Molet, L., 125, 403, 411, 416, 585,
 599, 600
 Monclaro, Francisco de, 541, 543,
 548, 604
 Mondain, G., 587
 Möngke, 161, 289
 Mookerji, R., 60, 219
 Moore, E. H., 93
 Moranville, H., 298
 Morin, E., 619
 Morineau, M., 495, 680
 Morris, I., 3, 10, 16, 19, 20, 45, 155,
 180, 182, 312, 316, 458, 459, 460,
 528, 639, 645
 Morrison, K. D., 174, 332
 Mpu Prapañca, 271
 Mu'āwiya, 43, 59
 al-Mu'ayyad, 313, 324
 al-Mu'ayyad, 321
 Mubarak al-Anmatī, 306
 Mudar, K. M., 94
 Muḥammad (Prophet), 6, 8, 17,
 42–43, 47, 49, 50, 177, 199, 394,
 405, 591, 598
 Muhammad Bhaktiyār Khaljī, 231
 Muḥammad ibn Sulaymān, 535
 Muḥammad ibn Tughlūq, 173,
 176, 210, 234, 235, 243, 244
 Muḥammad Shāh III, 456, 482
 Muhammad Shaybānī, 516
 Mu'izz ud-Dīn Muhammad ibn
 Sām, 230
 al-Mujāhid 'Alī, 315, 327
 Mukherjee, R., 83, 93, 148, 255
 Mukteshvara, 222
 Mukund, K., 226, 484
 Munthe, L., 394, 577
 Murdoch, G. P., 131
 al-Mustanşir, 321
 al-Muqaddasī, 47, 51, 113, 200,
 284, 317, 318, 319
 al-Muqtadir, 30, 63, 68

- Murad II (Ottoman emperor),
 449, 516
 al-Muradi, 165, 182
 Mus, P., 421
 Musa bin Amrani, 346
 Mūsā ibn Shākir, 65
 al-Mustansir, 306
 al-Mustaʿsim, 289
 al-Muʿtasim, 45, 46
 al-Mutawakkil, 45, 65
 Mutoro, H., 114, 340
 al-Muʿayyad Shaykh, 523, 524
 al-Muzaffar Yūsuf, 313
 Muzaffar, Rasūlid al-, 311
 Mworoha, E., 588

 Nābulṣī, 309
 Nacquart, 408
 al-Nadīm, 44
 Nagabhata, 76
 Nagabhata II, 76
 Nagarjuna, 46
 Nāhuda Qayṣar, 485
 Naina Catu, 507
 Naina Suryadeva, 507
 Nakazato, M., 32
 Nanak, 477
 Nandivarman III, 86
 Narapatishu, 254
 Narasimhadeva, 233
 Narasimhavarman I, 85
 Narasimhavarman II, 85
 al-Nāsir, 282
 al-Nāṣir Aḥmad, 531, 532
 al-Nāṣir al-Jassānī, 531
 Nāṣir-i Khusrau, 56, 283, 284, 339
 an-Nāṣir Muḥammad, 312, 524
 an-Nāṣir Muḥammad ibn
 Qalāwūn, 170, 312, 314
 Nāṣir-i Khusrau, 56, 283, 339
 Nathanael, Rabbi, 299
 Nawrūz, 523
 Neckam, A., 200
 Ndayishinguje, P., 588
 Needham, J., 22, 37, 39, 43, 46, 49,
 66, 76, 150, 152, 163, 164, 168, 173,
 181, 183, 186, 191, 193, 194, 196,
 198, 200, 203, 241, 286, 287, 434,
 439, 453, 464, 466, 467, 655,
 685, 687
 Nefedov, S. A., 641, 642, 643
 Newitt, M., 157, 331, 449, 537, 541,
 542, 543, 545, 546, 547, 548, 607,
 608, 610, 612, 613, 659

 Niane, D. T., 115
 Nicolas V (pope), 439, 442
 Nicolay, N. de, 517
 Nik Hassan Shuhaimi bin Nik
 Abdul Rahman, 90
 Nikitin, Afanasy, 295, 482,
 520, 606
 Nilakanta Sastri, K. A., 262
 Nilsson, M. P., 425
 Nīmdihī, 519
 Ningguo, 25
 Nizām al-Mulk, 65, 281
 Nizami, 296
 Nkongolo, 588
 Noiret, F., 417
 Norel, P., 4, 8, 20, 21, 22, 26, 28,
 32, 44, 48, 50, 54, 55, 58, 148, 155,
 165, 169, 171, 174, 179, 181, 182,
 184, 187, 188, 192, 213, 451, 471,
 472, 517, 605, 608, 622, 625, 637,
 638, 641, 644, 650, 651, 656, 657,
 672, 673, 674, 681, 682, 683, 684,
 687, 688, 689
 North, D. C., 638, 674, 683
 Nova, João da, 575
 Nunez, A., 599
 Nuniz, Fernao, 485
 Nūr al-Dīn, 285
 Nurse, D., 106, 107, 120, 124, 349,
 384, 396, 397, 400
 Nuruddin Firuz, 236

 O'Rourke, K., 444, 446, 450
 Ochi family, 470
 Odoric of Pordenone, 169, 211
 Ögödei, 160, 161, 288, 289, 290,
 291, 643
 Oliver, R., 135, 356, 409, 560
 Oresme, N., 167
 Orléan, A., 171, 652, 688, 689
 O'Rourke, K., 8, 15, 16, 46, 51, 68,
 169, 172, 174, 176, 181, 190, 193,
 300, 316, 438, 439, 443, 444, 446,
 451, 510, 522, 523, 529, 602, 608
 Ossenbruggen, F. D. E. van, 416
 Ottino, P., 110, 124, 345, 366, 372,
 395, 402, 404, 405, 406, 407,
 408, 410, 414, 416, 417, 422, 425,
 426, 429, 589, 594, 595, 645, 648
 Otto the Great, 150

 Pacey, A., 163, 164, 165, 173, 179,
 182, 189, 191, 214, 289, 291, 440,
 516, 607, 636, 637

 Padmapāni (deity), 91
 Palat, R. A., 84, 194, 203, 221, 222,
 223, 234, 235, 240, 241, 242, 243,
 247, 251, 275, 288, 297, 460, 470,
 478, 481, 484, 485, 486, 487, 488,
 489, 491, 492, 493, 507, 531, 542,
 606, 633, 666, 677, 684, 688
 Palsky, G., 172, 445, 446
 Panangkaran, 97
 Pannetier, J., 143, 568
 Parākramabāhu VI, 489
 Parānavitana, S., 267
 Parker, G., 663
 Parker Pearson, M., 143, 388, 389,
 390, 583
 Parkinson, W. A., 337, 657
 Parry, J., 669, 689
 Partant, F., 651
 Partington, J. R., 43, 163, 168, 181
 Pathmanathan, S., 225
 Paulme, D., 600
 Pavet de Courteille, Abel, 72
 Pearson, M. N., 70, 118, 149, 193,
 214, 236, 237, 272, 308, 318, 331,
 333, 338, 354, 356, 357, 360, 364,
 440, 443, 444, 452, 462, 467,
 478, 479, 480, 482, 517, 537, 538,
 540, 541, 542, 543, 544, 545, 547,
 548, 552, 603, 604, 605, 606,
 607, 608, 609, 653, 685
 Pedro Anes (Pedreanes), 613
 Pegolotti, Francesco Balducci,
 169, 204
 Pelliot, P., 37, 39, 207, 210, 214,
 250, 270, 277, 382, 384, 461, 462,
 463, 488
 Pelras, C., 136, 424, 427, 588
 Pepin the Short, 7
 Peregrine, P., 108, 109, 653,
 655, 668
 Pereira, Nuno Vaz, 546
 Pericles, 667
 Perlin, F., 483
 Perkins, J., 120
 Peroz, 24, 43
 Perrier, X., 398
 Perrier de la Bathie, H., 143
 Pescatello, A. M., 493
 Peter Abelard, 153
 Philippe Auguste, 151
 Philippe le Bel, 151
 Philippson, G., 349, 396, 397,
 398, 586
 Phillips, H. P., 181

- Phillipson, D. W., 115, 162, 307
 Pigafetta, 569
 Pikirayi, I., 117, 334, 336, 337, 338, 360, 540, 545, 653
 Pir Badr, 493
 Pirenne, H., 8, 171, 280
 Pires, Tomé, 433, 448, 470, 471, 479–480, 481, 490, 491, 492, 493, 494, 496, 497, 498, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511, 512, 513, 519, 520, 533, 537, 552, 573, 574, 602, 603, 670
 Piriya, K., 270
 Pizarro, Francisco, 455, 457
 Planhol, X. de, 6
 Pliny, 24, 248, 379, 606, 663
 Pliny the Elder, 3
 Pluvier, J. M., 19
 Pocktsy, J. L., 112, 402
 Poirier, C., 564
 Poirier, J., 585
 Polanyi, K., 543, 622, 681, 689
 Pollock, S., 74, 262
 Polo, Maffeo, 293
 Polo, Marco, 26, 61, 169, 187, 198, 200, 205, 206–208, 211, 216, 218, 219, 233, 235, 236, 237, 239, 240, 248, 249, 252, 267, 268, 271–272, 280, 291, 292, 293, 295, 322, 323, 325, 382–384, 444, 445, 497, 605–606, 610, 669
 Polo, Nicolo, 293
 Pomeranz, K., 7, 25, 179, 191, 206, 213, 455, 458, 459, 472, 474, 482, 483, 488, 509, 610, 638, 658, 673, 684, 685, 688, 689
 Pomponius Mela, 3
 Ponting, C., 163, 173, 174
 Popovic, A., 68, 69
 Porter, T., 173, 442, 533, 534
 Portères, R., 399, 597
 Potin, Y., 439, 440, 441
 Pottier, C., 95
 Poumailloux, P., 354, 355, 586, 604, 616
 Pouwels, R. L., 106, 109, 111, 122, 123, 329, 344, 345, 347, 348, 349, 352, 355, 356, 357, 538, 539, 547, 550, 596, 597, 608, 655
 Powell, J. G. F., 642
 Pradines, S., 59, 118, 121, 122, 125, 342, 344, 346, 348, 350, 353, 354, 355, 549
 Prange, S. R., 158
 Prestholdt, J., 549
 Prins, A. H. J., 549, 586
 Priuli, Girolamo, 603
 Protagoras, 445
 Pryor, J., 55
 Ptak, R., 240, 276, 444, 469, 520
 Ptolemy, 40, 42, 65, 379, 445, 586
 Pu Shougeng, 199, 205, 676
 Pulakeshin II, 79
 Purchas, S., 562
 Pwiti, G., 116, 336, 537
 Pydyn, A., 655
 Pyrard de Laval, 574
 Qā'itbāy, 457, 528, 529, 530
 Qalāwūn, 299, 310, 311, 313, 316
 al-Qalqashandī, 300, 308, 313, 317, 525
 Qāmrun, 380
 Qanī, 318
 Qānṣawh, 530
 al-Qazwīnī, 294
 Qī Dongfang, 27
 Qian Tai, 192
 Qin Jiushao, 191, 195
 Qingjun, 196, 467
 Qiu Jun, 452, 474, 475
 Quataert, D., 172, 443, 517
 Quinn, W. H., 4, 12, 69, 70, 160, 299, 435
 al-Qummī, 42
 Qutb ud-Dīn Aibak, 230, 231
 Qutb ud-Dīn Khaljī, 243
 Raban, Joseph, 218
 Rabban Bar Sauma, 293
 Rabedaoro, S., 592
 Rabie, H., 308, 309
 Racoube (legendary figure), 405, 410, 413
 Radama II, 595
 Radanielina, T., 401
 Raden Patah, 503
 Raden Samudra, 408
 Raden Vijaya, 272
 Radimilahy, C., 128, 129, 137, 139, 140, 141, 355, 373, 374, 375, 376, 388, 389, 393, 394, 411, 416, 557, 582, 583
 Rafohy (legendary figure), 414, 578
 Rafolo, A., 420, 566, 579, 581
 Rahadzi (legendary figure), 405, 413
 Raharijaona, S., 564
 Rahmstorf, S., 643
 Rainilaiarivony, 421
 Raison-Jourde, F., 395, 417, 588, 592
 Rajaonarimanana, N., 576, 588, 591
 Rājārāja, 87, 221, 223, 224, 225, 226
 Rājasimhan, 226
 Rājendra, 91, 221, 223, 226, 227
 Rājendrachola, 91
 Rājendradevakulottunga, 262
 Rakai Mataram, 97
 Rakai Pikatan, 100
 Rakotoarisoa, J.-A., 143, 372, 387, 388, 409, 413, 547, 581, 582, 583
 Rakotomalala, M., 421, 581
 Rakotovololona, S., 376, 386
 Rakotozafy, L., 140
 Ralambo, 406
 Ralitavaratra, 598
 Ralivoaziry, 589, 591
 Rāma Khamhaeng, 270
 Ramachandra, 238
 Ramakararo, 411, 589, 590, 591
 Ramanalimanjaka (legendary figure), 414
 Ramapāla, 228
 Ramarohalaña, 595, 596, 597, 598
 Ramaswamy, V., 223, 225, 226, 233, 234, 477, 487, 488, 490, 491
 Ramilison, 413
 Ramilisonina, 387, 424, 580
 Raminia, 379, 403, 404, 405, 407, 408, 410, 590
 Rāmisht, 283, 304, 305, 318, 320, 605
 al-Rammāh, al-Ḥasan, 163, 168, 181, 203, 294
 Ramses III, 623
 Randles, W. G. L., 415, 540, 541, 543, 544, 545, 549, 550, 563, 588, 596, 614, 653
 Rangita, 578, 587
 Rantoandro, G., 428
 Rao, V. N., 485
 Rapeto (legendary figure), 394, 395, 414, 426
 Ras, J. J., 405
 Rasamuel, D., 386, 387, 389, 580, 581, 582
 Raselimanana, A. P., 138

- Rashid ad-Dīn Hamadānī, 294, 296
 Rasoalao (legendary figure), 394
 Rasoarifetra, B., 582
 Raspopov, O. M., 619
 Rastud al-Dīn, 243
 Rathbone, D., 672
 Ravesco, 349
 Ray, H., 235
 Ray, H. P., 14, 39, 95, 102, 206, 462, 479, 638, 670, 672
 Raymond Étienne (Dominican friar), 325
 al-Razī (Rhazes), 66, 167
 Razziya, 356
 Reade, J., 619
 Redding, R. W., 126
 Reddy, K., 80
 Regert, M., 128, 320
 Reid, A., 211, 212, 214, 263, 268, 270, 274, 275, 276, 277, 374, 443, 446, 449, 451, 454, 458, 470, 492, 496, 497, 501, 502, 503, 504, 505, 507, 509, 664, 685
 Reid, D. A. M., 117
 Reinel, Pedro, 553
 Reis, Piri, 130, 555, 572–573
 Renaud de Châtillon, 307, 309
 Renel, C., 395
 Renou, L., 594
 Renfrew, C., 619
 Rey, P.-P., 50, 52, 53, 158, 166, 167
 Riazuddin, A., 234
 Ricardo, D., 651
 Richards, A., 424
 Richards, J. F., 216, 230, 231, 235, 242, 249, 313, 480
 Richardson, J., 570
 Ricks, T. M., 120
 Robb, P., 223, 484
 Robert of Chester, 55, 151
 Robertshaw, P., 116, 117, 334, 335, 338, 341, 354, 369, 375, 376
 Robertson, J., 61
 Rockhill, W. W., 24, 88, 103, 105, 118, 178, 183, 184, 196, 197, 198, 204, 211, 229, 250, 252, 254, 262, 264, 265, 266, 274, 319, 333, 339, 340, 347, 385
 Rodinson, M., 48, 58, 408, 594, 670
 Roger I (king of Sicily), 149
 Roger II (king of Sicily), 135, 301
 Roger of Palma, 167
 Roitman, J., 652
 Rolland, D., 349
 Rombaka, J. P., 589, 590, 591
 Ronan, C. A., 73, 150, 182, 186, 189
 Ronetans/Ronstanes, 561
 Roriz, Fernam Martinez de, 433
 Rosenberger, B., 54, 58, 149, 219, 291, 300, 301, 306, 310, 311, 314, 442, 528, 656
 Rossabi, M., 169
 Rosselli, Francesco, 384, 602
 Rothermund, D., 75, 80, 84, 85, 86, 89, 98, 103, 218, 221, 222, 225, 226, 227, 228, 230, 231, 239, 242, 243, 482, 484
 Rothman, M. S., 653
 Rotter, G., 124
 Roudart, L., 8, 150, 164, 436, 453, 683
 Rougeulle, A., 59, 62, 70, 109, 119, 128, 283, 284, 294, 308, 317, 319, 320, 348
 Roux, J.-P., 9, 10
 Rowlands, M., 108, 653
 Rudner, D., 488
 Rukn al-Dīn Bārbak Shāh, 493
 Runciman, S., 10
 Russell Jones, 299
 Ruud, J., 416
 Ruy Pereira, 413, 457, 574, 575, 599, 610, 611
 Ruysch, J., 610
 Saadi, 296
 Sachau, E., 332
 Sachs, C., 405
 Sacleux, C., 368, 394, 396, 401, 601
 Sa'd al-Daulah, 290
 Said Bakari, 369
 Said Muhammad, 493
 Sailendra, 420
 Saitowitz, S. J., 92
 Sākyamuni (deity), 91
 Saladin, 149, 154, 177, 285, 298, 300, 303, 307, 308, 309, 321
 Ṣalāh b. 'Alī, 531
 Saldanha, A. de, 540
 Saliba, G., 6, 44, 65, 66, 296, 439
 Salim ben Radjab, 566
 Saller, R., 640
 Salles, J.-F., 628
 Salmon, C., 26, 27, 37, 182, 185, 195, 199, 205, 212, 214, 469, 471
 Samamo, 558, 563, 615
 Samarot, 615
 Šams al-Dīn Muḥammad b. Malik Tāzigū, 292
 San Stefano, Girolamo di, 519
 Sanchez, S. F., 555, 560, 561, 562, 613
 Sandhu, K. S., 506
 Sang Perta Dewa, 505
 Sanjar, 230, 281
 Sanjaya, 97, 98
 Santos, João dos, 355, 540, 543, 544, 547, 549, 550, 615
 Sanudo, Marino, 172, 528
 Sarakhsi, 56, 57
 Sasaki, H., 511
 Sassoon, H., 363
 Sastri, K. A. Nilakanta, 90, 91, 223, 228, 254, 262
 Sauvaget, J., 26, 39, 40, 43, 90, 111, 113, 133, 605
 Savage-Smith, E., 271
 Savonarola, G., 437
 Sayfuddin, 520
 Sayyid bin Abū 'Alī, 239
 Scanlon, G. T., 59, 306, 314
 Schafer, E. H., 18, 20, 21, 23, 24, 25, 26, 27, 28, 30, 34, 91
 Scheidel, W., 629, 675, 678
 Schenk, H., 83
 Schmitt, J.-C., 172, 188, 444, 445, 446, 688
 Schneider, J., 653, 668
 Schoff, W. H., 364
 Schottenhammer, A., 86, 184, 187, 199, 201, 202, 264, 266
 Schreurs, G., 565, 567, 568
 Schultz, W. C., 524
 Schumpeter, J. A., 672
 Schwartz, H. M., 683
 Schweinfurth, G., 399, 597
 Scubla, L., 691
 Segobye, A., 117
 Sejong, 463
 Selbourne, D., 208
 Selim I (Ottoman emperor), 457, 518
 Sen, S. N., 223
 Seneca, 433, 602
 Sequeira, Diogo Lopes de, 546
 Serjeant, R. B., 50, 300, 309, 321, 324, 326, 327, 370, 379, 532, 533, 546, 597
 Servet, J. M., 657
 Sesiano, J., 46, 593

- Severus Sebokht, 55
 Sha Wen, 262
 Shaban, M. A., 300
 Shagdar, B., 205
 Shāh Rukh, 213, 462, 485, 515
 al-Shahri, 'A. A. 'A. M., 324
 Shan Tsung, 356
 Shankara, 74, 483
 Shanmugam, P., 226
 Sharma, R. S., 72, 73, 77, 82
 Shatzmiller, B., 48
 Shatzmiller, M., 48, 49, 51, 70
 Shaiking, 356
 Shaw, T., 52
 Shawar, 301
 Shaybānī, 57
 Shaykh Junayd, 518
 Sheba, 162
 Shemon, 63
 Shen Kuo, 189
 Shenzong, 187
 Shepherd, G., 111, 112, 140, 142, 367, 381, 410
 Sheriff, A., 47, 68, 113, 284, 330, 333, 546, 605, 610
 Sherratt, A., 108, 620, 625, 650, 653, 654, 659, 663
 Sherratt, S., 108, 625, 653, 663
 Shi Huangdi, 628
 Shiba, Y., 186
 al-Shirāzī, Qutb al-Din, 296
 Shiva (deity), 76, 96, 97, 100, 229
 Shomu, 28
 Shulman, D., 485
 Siddharāja Jayasimha, 217
 Siddiqui, I. H., 234, 235
 Sīdī 'Alī Celeb, 569
 Sigismund I (king of Hungary), 175
 Sihirindī, 365
 Sikandar Lodi, 480
 Silberman, L., 370
 Silveira, António da, 538, 543, 653
 Silver, B. J., 640, 641, 651, 681, 690
 Silver, M., 623, 626
 Sima Guang, 36
 Simeon I (king of Bulgaria), 14
 Simon, P., 422–423, 424, 425, 426, 429
 Simonnot, 8, 44
 Sinclair, P., 110, 112, 115, 116, 127, 129, 329, 331, 332, 338, 340, 346, 351, 364, 538, 539, 544, 549, 551, 607
 Sindhind, 66
 Sindok, 103
 Singer, B., 391
 Singh, U., 74, 78, 220, 221, 222, 224, 228, 233, 237
 Singhana II (Yadava king), 232
 Sinopoli, 234
 al-Sirāfi, 60, 63, 90, 108, 111, 113, 132–133, 134, 135, 318, 383, 544, 605
 Sircar, D. C., 237
 Sirhindi, Y., 244
 Skeat, W. W., 395, 589
 Sleen, W. van der, 141, 566
 Smidt, W., 38, 39, 118
 Smith, A., 171
 Smith, A. B., 131
 Smith, G. R., 308, 382
 Soares, Fernão, 610
 Soebadio, H., 99
 Soekmono, 97
 Solomon (bibl. figure), 162
 Sombart, W., 152, 167, 171, 442, 641, 670, 672, 690
 Sonni 'Alī Ber, 440
 Soodyall, H., 391, 392
 Sorrel, P., 4, 285
 Southworth, W. A., 91, 96, 97, 256
 Spaulding, J., 174
 Spear, T., 106, 107, 124, 329, 347, 349
 Spencer, G. W., 222, 223, 235, 239, 485
 Sri Dvāravatī, 94
 Stark, M. T., 255
 Staubwasser, M., 620
 Stein, B., 73, 74, 75, 100, 222, 223, 237, 242, 477, 484
 Stein, G. J., 655, 656, 658
 Stiles, D., 356
 Stöhr, W., 408, 415
 Strozzi, Piero, 608
 Su Song, 182, 183
 Suarez, T., 267, 569, 610
 Subbarayalu, Y., 85, 86, 223, 225, 226, 239
 Subrahmanyam, S., 10, 50, 57, 73, 79, 168, 231, 233, 241, 243, 244, 246, 439, 441, 446, 451, 455, 478, 479, 480, 481, 482, 483, 485, 486, 487, 488, 489, 490, 493, 494, 505, 507, 518, 519, 520, 525, 530, 533, 603, 605, 607, 608, 609, 635, 670, 673, 676, 677, 678, 679, 682
 Subuktigīn, 216
 Sugatipa Madhumati (Muhammad), 82
 Sugihara, K., 489, 685, 688, 689
 Sui Wendi, 18
 Sulaymān (merchant), 39
 Sulaymān ibn al-Husayn, 366
 Sulaymān al-Mahri, 383, 488, 553, 569, 570, 574
 Süleyman I, 457, 518
 Summers, R., 115, 354, 544
 Sun Zhong, 185
 Sunjata, 313
 Sūryavarman I, 227, 252
 Sūryavarman II, 255, 256, 260
 Sutton, J. E. G., 52, 120, 348, 353, 360, 361, 362, 366, 535, 536, 596
 Suzong, 25, 31
 Swan, L. M., 115, 116, 336, 337, 338, 540, 544, 653
 Swellengrebel, J. L., 417
 Sykes, P. M., 518
 Sylvester II (pope), 151
 al-Tabarī, 51, 66, 68, 70, 79, 82, 135
 Tacitus, 650
 Tafur, Pedro, 515
 Tainter, J. A., 30, 640
 Taizong, 19, 23, 25, 28, 29, 40
 Taizu, 178
 Taj ed-Dīn Ibn al-Kūlamī, 247
 al-Takritī, 326, 327, 673
 Tamerlane (Timūr Lang), 175, 177, 241, 244, 245, 280, 297–298, 316, 456, 462, 481, 494, 515, 520, 522
 Tampoe, M., 39, 59, 197
 Tan, M., 160, 288
 Tan Yeok Seong, 262
 at-Tawhīdī, 50
 Tawney, R. H., 670
 Tejapāla, 238
 Temple, R., 8, 22, 163, 179, 181, 182, 191, 200, 203
 Terray, E., 158, 159, 440
 Thaālibi, 45
 Thackston, W. M., 490
 Thakur, S. P., 243, 633

- Thapar, R., 74, 75, 217, 223, 229, 672
- Theophanes, 43
- Theophrastus, 436
- Thierry, F., 21, 36
- Thomas Aquinas, 167
- Thomas of Cana, 83
- Thomas, R. P., 422, 424, 425
- Thomaz, L. F., 384, 413, 494, 505, 506, 507, 508, 513, 553, 574, 575, 602, 603, 610
- Thompson, L. G., 20, 159, 174, 472
- Thondhlana, T. P., 335
- Thorbahn, P. F., 544
- Thurgood, G., 96
- Tibbetts, G. R., 61, 90, 101, 136, 380, 381, 506, 552, 553, 569, 570, 571
- al-Tibi, Jamāl al-Dīn Ibrāhīm, 240, 280, 292, 677
- al-Tibi, Taqī al-Dīn, 240, 280, 325, 677
- al-Tibi family, 246, 292–293, 677
- Timūr Lang, *see* Tamerlane
- Tinbu, 219
- Tingimaro, 562, 615; *see* Guinguimaro
- Tobing, P., 415
- Tofanelli, S., 392
- Tokhtamysh, 297
- Tomaschek, W., 571
- Topik, S., 25, 206, 509, 658, 685
- Topoli, 183
- Toscanelli, P., 433, 453
- Toussaint, A., 609
- Tracy, J. D., 227, 503, 659
- Trailok, 509
- Treadgold, W., 10
- Treydte, K., 160
- Trimingham, J. S., 113, 119, 133, 342, 348, 352, 353, 355, 380, 560
- Trisong Detsen, 33
- Troubat, M., 567
- Tryon, D., 400
- Tsaboto, J., 594
- Tughril I, 280
- Tughril III, 282
- Tughtakīn, 321
- Tumgumaro, 562; *see* Guinguimaro
- Tūrānshāh, 321
- Turchin, P., 641, 642, 643, 645, 664
- Turgesh, 23
- Turner, H. R., 67
- Turner, V. W., 596
- aṭ-Ṭūsī, 284, 296, 439
- Tustārī brothers, 301, 676
- Udovitch, A. L., 55, 56, 57, 283
- Ulugh-Beg, 515
- ‘Umar, 6, 39, 43, 50, 57, 321
- ‘Umar b. ‘Alī b. Rasūl, 321
- ‘Umar Khayyām, 285
- al-‘Umarī, 133, 159, 230, 234, 248, 249, 295, 314, 317, 326
- ‘Umar II, 44
- Upu Lera (deity), 415
- Usoskin, I. G., 619, 644, 646
- ‘Utba ibn Ghazwān, 39
- al-‘Utbī, 216
- ‘Uthmān, 6, 43
- Uzbek Khān, 169
- Uzun Hasan, 450, 516, 518, 531
- Vajrabodhi, 24, 89
- Vajrapāni (deity), 91
- Valérian, D., 439
- Vallet, E., 113, 162, 164, 167, 236, 237, 239, 240, 241, 248, 283, 284, 291, 292, 299, 300, 301, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 352, 353, 363, 443, 447, 482, 522, 524, 525, 527, 528, 531, 532, 533, 535, 669, 677
- van Aelst, A., 261, 265, 279
- Van der Meersch, J., 561
- Van der Weijden, G., 425, 427
- van de Mieroop, M., 675
- Van Gennep, A., 589
- Van Leur, J. C., 495
- van Waarden, C., 336
- van Wouden, F. A. E., 589
- Varenne, J., 74
- Varthema, L. di, 211, 246, 247, 480, 485, 491, 492, 498, 527
- Vastupāla, 238
- Vaughan, D. A., 401
- Vaz Dourado, Fernao, 562
- Vaz Soares, P., 542
- Veenhof, K. R., 623
- Veera Ballala II, 232
- Veera Ballala III, 232
- Velho, A., 331
- Veloso, G., 540, 548
- Vences, M., 138
- Verger, J., 166, 444, 445
- Vérin, P., 111, 119, 124, 125, 127, 128, 129, 130, 132, 133, 135, 137, 139, 141, 142, 366, 367, 369, 371, 374, 375, 376, 377, 378, 386, 387, 388, 389, 390, 391, 392, 393, 395, 396, 403, 408, 411, 552, 553, 554, 555, 557, 558, 559, 560, 561, 562, 564, 565, 566, 567, 568, 569, 570, 583, 584, 585, 586, 592, 611, 614, 615, 649
- Verley, P., 673
- Vernet, T., 111, 330, 340, 348, 349, 350, 351, 357, 358, 364, 538, 539, 546, 547, 548, 550, 551, 552, 560, 586, 597, 603, 608, 655
- Vernier, E., 377, 403, 411, 564, 565, 566, 567, 568
- Vespucci, Amerigo, 446, 494
- Vespucci, Giovanni, 561
- Vickery, M., 96, 97, 256, 260, 270, 272, 274, 275, 509, 510, 511
- Vidyadhar, 229
- Vidyāranya, 483
- Vijayabāhu I, 253
- Vikramaditya I, 79
- Vikramaditya II, 79
- Vikramaditya VI, 220, 228
- Vilar, P., 170, 443, 453, 455
- Vimal Shāh, 217
- Vira Narasimha, 604
- Viré, F., 136, 137, 332, 333, 354, 356, 367, 368, 379, 380, 381, 402, 403, 553, 569, 570, 571, 610
- Vishnu (deity), 85, 86, 93, 100, 199, 255, 405, 406, 462
- Viṣṇuvardhana, 271
- Viso-Rey, 574
- Vivaldi brothers, 172
- Vladimir of Kiev, 14
- Voaziry, 582
- Vogel, H. U., 237, 494
- Vogel, P., 338
- Voigt, E. A., 140, 338
- von Glahn, R., 195, 201, 202, 204, 213, 450, 459, 474, 685
- Vries, J. de, 488, 619
- Wade, G., 461, 510, 511
- Wagner, D. B., 181
- Waldseemüller, Martin, 610
- Walery, S., 437, 442
- al-Walid, 44

- Wallerstein, I., 107, 152, 157, 166, 240, 242, 243, 251, 275, 485, 486, 537, 630, 636, 640, 641, 651, 655, 668, 675, 680, 681, 684, 685, 689, 690, 691
 Walsh, M., 126, 138
 Walshaw, S. C., 112, 329
 Walter de Milemete, 163
 Walton, L., 192
 Walz, J., 121
 Wang Anshi, 148, 180, 184, 188, 636
 Wang Chen, 687
 Wang Ching-hung, 468
 Wang Dayuan, 210, 211, 250, 266, 274, 275
 Wang Ge, 191
 Wang Gungwu, 19, 24, 31, 33, 36, 37, 86, 90, 91, 103, 469
 Wang Qi, 214
 Wang Yunmao, 263
 Waq (deity), 132
 al-Wāqidī, 51
 Warburton, D., 437, 468, 618, 620, 621, 622, 623, 624
 Warnier, J.-P., 652, 657
 Wāṣṣāf, 248, 249, 275, 280, 291, 292, 293, 294
 Watson, A. M., 6, 47, 48, 282, 399
 Watt, James, 687, 688
 Webber, Father, 425
 Weber, M., 152, 171, 660, 670, 672, 681
 Weiss, H., 620
 Weitzman, M., 690
 Wetterstrom, W., 580, 581
 Wencheng, 25
 Wheatley, P., 24, 38, 91, 92, 110, 190, 196, 197, 257, 266, 267, 275, 347, 380, 506
 Whitcomb, I., 120
 Whitehouse, D., 114, 284, 537
 Whitelaw, G., 117
 Whitmore, J. K., 273, 511, 513
 Wicks, R. S., 33, 90, 92, 94, 95, 97, 98, 101, 102, 184, 201, 204, 228, 229, 237, 238, 252, 254, 255, 256, 259, 260, 261, 262, 263, 265, 267, 270, 275, 279, 498, 510, 513, 669
 Wilensky, J., 25, 37, 38, 197
 Wilkinson, D., 644, 660
 Wilkinson, J. C., 60, 120, 350
 Wilkinson, R. J., 428
 Willcox, G., 636
 William of Conches, 153
 William of Normandy, 177
 William of Ockham, 167
 William of Rubruck, 163, 289
 William of Tyre, 307
 Willis, J., 348
 Wilson, T. H., 119, 341, 356
 Wink, A., 10, 61, 66, 67, 68, 70, 75, 76, 81, 82, 83, 85, 87, 92, 113, 122, 156, 168, 216, 219, 221, 228, 229, 230, 231, 232, 234, 237, 241, 271, 282, 288, 289, 290, 302, 312, 331, 365, 446, 478, 480, 481, 489, 502, 664
 Wisseman Christie, J., 89, 98, 100, 101, 102, 103, 104, 137, 240, 251, 258, 260, 261, 264, 278, 418, 628
 Wittfogel, K. A., 428
 Wladyslaw III (king of Poland and Hungary), 449
 Wolf, E. R., 658, 680
 Wolff, J., 400
 Wolters, O., 89, 90, 103, 254, 257, 262, 276, 277, 394, 589
 Wong, D. C., 28, 29, 35
 Wong, R. B., 19, 20, 25, 153, 434, 437, 452, 468, 469, 472, 475, 633, 674, 679, 685, 686
 Wood, F., 205
 Wood, M., 87, 114, 115, 116, 133, 334, 335, 336, 338, 340, 354, 363, 372, 375, 540, 541
 Wright, H. T., 108, 119, 125, 126, 127, 128, 129, 130, 131, 139, 142, 143, 329, 341, 342, 346, 352, 366, 367, 369, 370, 372, 373, 374, 376, 378, 385, 386, 387, 388, 389, 390, 391, 413, 553, 556, 557, 561, 566, 578, 580, 581, 582, 583, 584, 648
 Wu Zetian, 28, 29
 Wudi, 32, 463
 Wuzong, 29, 35
 Wyatt, D., 254
 Wynne-Jones, S., 107, 110, 112, 113, 120, 121, 123, 127, 129
 Xianzong, 469
 Xin-ya-tuo-luo, 185
 Xuande, 434, 463
 Xuanzang, 25, 29, 73, 75, 76, 79, 84, 86, 94
 Yamamura, K., 28, 200, 459, 460
 Yang Ke, 194
 Yang Zhia, 195
 Yangdi, 19
 Ya'qūbī, 54, 60, 61, 65, 133, 667
 Yāqūt, 111, 284, 339, 342, 345, 349, 350, 351, 379
 Ye Shi, 202
 Yelü Chucai, 288
 Yerasimos, S., 209, 292
 Yeshaq I, 451
 Yi Hoe, 196, 467
 Yi Xing, 182
 Yijing, 29, 61, 88, 89, 99
 Yingsheng, L., 239
 Yoffee, N., 618
 Yongle, 25, 214, 215, 434, 448, 458, 459, 460, 461, 467, 470, 473, 475, 493, 505, 552
 Yoshimasa, 470
 Yoshimitsu, 214
 Yuan Chen, 18
 Yule, H., 600
 Yunus ibn Mihrān, 90
 Zafar Khān Muzaffar, 478
 al-Zafir 'Amir II, 534
 al-Zāhir, 532
 Zaki al-Dīn al-Kharrūbī, 316
 Zar'a Ya'eqob, 451
 Zayd, 69
 Zengi, 285
 Zeno, 9
 Zhang Ruhou, 215
 Zhang Tao, 474
 Zhang, D. D., 160, 288, 473, 646
 Zhang, P., 36, 642
 Zhao, B., 184, 195, 261, 320, 363, 434, 536, 565
 Zhao Kuangyin, 178
 Zhao Rugua, 103, 105, 133, 156, 183, 184, 196, 197, 198, 199, 218, 229, 237, 252, 255, 256, 257, 262, 264, 265, 266–267, 268, 333, 339, 340, 354, 384, 410
 Zhao Shi, 202

- Zheng He, 187, 295, 434, 444, 449,
 456, 458, 460, 461, 462, 463,
 464, 465, 466, 467, 468, 469,
 490, 492, 496, 497, 505, 510, 511,
 520, 523, 536, 552, 644
 Zheng Yijun, 463
- Zhou Daguan, 209, 255
 Zhou Qufei, 133, 156, 178, 184, 196,
 197, 198, 199, 254, 264, 265, 266,
 319, 333, 384
 Zhu Siben, 196
 Zhu Xi, 189
- Zhu Yu, 197
 Zorc, R., 400
 Zosimos of Panopolis, 46
 al-Zuhri, 157
 Zuili, M., 437
 Zurndorfer, H. T., 201, 202, 473

SUBJECT INDEX

- Abbasid dynasty, 6, 17, 24, 33,
 45–71, 112, 185, 639, 669,
 672, 674
Account of China and India, 21, 26,
 39–40, 54, 60, 61, 77, 79,
 80, 81, 82, 86, 91
 account, units of, 600
 in Europe, 171, 442
 accounting systems, 65, 171, 483,
 620, 674, 677
Adi Granth, 477
Aepyornis birds (elephant
 birds), 134
 in Madagascar, 383, 384–385
 use and trade in eggs of,
 139, 389
 Afify clan, 394
 Africans
 in Arabia, 113, 128, 332
 in China, 37, 197, 208
 in India, 235, 332, 356, 364, 365,
 479, 493, 606
 in Persian Gulf Area, 59, 68,
 69, 284, 332
 in Southeast Asia, 279
Aganamaru, 234
 age groups divisions
 in Madagascar, 596
 agricultural calendars, 422, 424,
 425, 594
 agricultural estates, 27, 73, 199,
 222, 273, 282, 439; *see*
 also iqtāʿ
 in China, 31, 148, 161, 179, 180,
 202, 205, 213, 468
 agricultural products
 long-distance trade in, 668
 agricultural revolution, 6, 47, 150,
 453, 683
 agricultural techniques, 270, 272,
 486, 509
 in China, 4, 20, 179, 190, 203
 in Europe, 7, 8, 150, 436,
 453
 in Muslim Empire, 6, 47
- agriculture
 declines of
 in Egypt, 12, 70, 300, 315,
 446, 447, 522
 in Europe, 173
 in India, 243
 in Persia, 282, 290–291
 in Seljuk Empire, 282
 development of/progress in,
 618, 627, 636, 640, 668
 Afro-Eurasian world-
 system, 433, 436, 634
 Burma, 253
 China, 4, 20, 34, 36, 147, 156,
 175, 178, 179, 190, 203,
 434, 458, 624, 625, 626,
 637, 685, 689
 East Africa, 110, 117, 336,
 341, 365
 Europe, 7, 8, 16, 436, 453
 India, 11, 73, 76, 86, 221, 234,
 484, 486
 Japan, 200, 460, 689
 Muslim Empire, 6, 47, 50
 Southeast Asia, 101, 255, 257,
 270, 272, 273, 275, 276,
 279, 448, 509, 512
 innovations in, 635, 640, 642, 643
 intensification in, 48, 76, 448,
 516, 634, 636
 in China, 178, 190
 in Europe, 436, 453
 on Madagascar, 556
 specialization in
 in China, 22, 156, 179,
 190–192
 Ainiñurruvar, 85
 alchemy
 in China, 22, 46, 152
 in Europe, 152
 in Muslim world, 46, 49, 66, 152
 alcohol
 distillation of
 in China, 22, 32, 188
 in Europe, 151, 152, 200, 287
- in Muslim world, 49
 exports, 510, 654, 667
 of China, 200
 taboo on, 425, 429
 alliances, 7, 89, 100, 108, 276, 289,
 290, 310, 319, 339, 418,
 450, 659
 of China, 25, 30, 33, 190
 of city-states, 319, 331, 340, 364,
 441, 679
 of elites in peripheries with
 cores, 330, 662
 between rulers and merchants,
 10, 58, 276, 293, 322, 441,
 448, 656, 677
Almagest, 65
 Almohad dynasty, 150, 151,
 165, 306
 Almoravid dynasty, 151, 157,
 303, 306
 aloeswood, 27, 86, 91, 92, 96, 197,
 198, 236, 250, 266, 268,
 305, 315, 511
 alphabets, 463, 516
 development/invention of,
 625, 663
 Amaryllidaceae plants, 415
 amber, 15, 25
 ambergris, 38, 65, 90, 111, 114, 118,
 132, 196, 197, 266, 302,
 339, 340, 342, 363,
 467, 491
 Anakara people, 590, 594, 596
 ancestors
 beliefs in reincarnation of,
 588–589
 worship of, 271, 335, 344, 386,
 407, 417, 420, 564, 579,
 595, 596, 598
 Andriambahoaka cycle myths,
 372, 405, 414, 416,
 417
 Andriambahoaka title, 132
Anganon'ny Ntaolo (Tales from
 the ancestors), 399

- animal husbandry
 in East Africa, 126
 in Madagascar, 138, 140
- animals
 domestication of, 620
 extinctions of
 in Madagascar, 373
 sacrificing of
 in Madagascar, 407
 trade in, 531
 use for packing, 591
- Anjoaty people, 392, 393, 568
- Añjuvannam guild, 82, 85, 218, 226
- Antalaotra people, 590, 592
- antalaotse* (sea people), 141, 393, 560, 561, 563, 569, 570, 614, 615
- Antambahoaka people, 403, 417, 419, 425, 427
- Antambazavaka people, 411
- Antanosy people, 393, 408, 425
- Antemasiry people, 590
- Antemoro manuscripts, 411
- Antemoro people, 349, 395, 404, 406, 420, 425, 427, 553, 585, 592
 origins of, 596
- Anteoñy people, 589, 590, 591, 594, 595, 598
- anthropological data
 on Malagasy population, 395–402
- anti-Muslim violence
 in China, 212
- Arabic culture, 6, 65–67, 120
 influences in Occident, 15, 55–57, 151, 152, 165, 166, 169, 191, 439
 influences on Madagascar, 404, 405, 576–577, 589–598
- Arabic language, 38, 40, 49, 56, 57, 59, 99, 107, 120, 122, 211, 380, 385, 395, 423, 439, 513
 influences on Malagasy language, 398, 400, 405, 407, 414, 570, 576, 579, 591, 593, 594, 599–601
- translation into
 of Greek works, 6, 44
 of Indian works, 44, 54, 66
- Arabic script, 104, 137, 199, 210, 236, 267, 475, 497, 498, 510, 516, 553
 in East Africa, 108, 109
 in Madagascar, 108, 390, 404, 410, 566, 567, 576–577, 589–598
- Arabs
 in China, 5, 11, 12, 24, 26, 31, 38, 61, 63, 104, 183, 184, 198, 199, 227, 267, 309, 469
 in Comoros, 124, 367, 369, 553
 cowries used by, 250
 defeat of Chinese by, 30
 in East Africa, 60, 106, 107–113, 118, 119, 283, 332, 340, 348, 349, 350, 352, 358, 538, 608
 in India, 60, 76, 81, 82, 233, 236, 237, 247, 479, 480, 481, 494
 migrations of
 to Southeast Asia, 268, 269
 navigation by, 43, 59–62, 70, 90, 92, 103, 107–113, 118, 119, 124, 157, 172, 183, 236, 266, 283, 309, 325, 332, 354, 379, 383, 449, 551, 553, 569–570, 603
 in North Africa, 17, 50
 slave trade by, 11, 46, 59, 113, 197, 332–333
 tribes of, 106, 111, 302, 345, 393
 unification of, 43
- architecture, 179, 210, 362, 533
 Comorian, 552–553
 East African, 121, 330, 346, 354, 355, 357, 361, 362, 535–536
 Indian, 210, 355, 481, 493
 Malagasy, 170, 558
 Ottoman, 518
 Southeast Asian, 93, 96, 101, 501
- aridification, 16, 42, 69, 143, 149, 449, 539, 648
 in Central Asia, 12, 160, 288
 in China, 35, 36, 159, 174, 273, 288, 472, 473
 in Egypt, 12, 70, 149, 157, 160, 173, 299, 315, 449, 525
 in India, 173, 243
 in Southeast Asia, 269, 273, 275, 276
- in western Asia, 12, 43
 in Mesopotamia, 12
- aristocracies, 9, 19, 24, 31, 52, 69, 70, 238, 257, 259, 269, 331, 337, 339, 348, 351, 356, 357, 441, 448, 501, 503, 517, 525, 542, 638, 677, 683
- Byzantine, 10, 154
- Japanese, 28, 199
- Khazar, 9
- Malagasy, 402, 404, 410, 413, 414, 417, 420–421, 578, 579, 582, 587
- Antemoro, 349, 404, 405, 406, 410, 420, 421, 577, 582, 591–598
- Mongol, 169, 205, 290, 312
- Armenians, 205, 289, 508
 long-distance trade by, 54, 303, 449, 517, 519, 678
- armies, 659, 665, 675
 Byzantine, 9, 154
 Chinese, 4, 19, 20, 23, 32, 33, 178, 199, 434, 452, 459, 460, 628
 expenditure on, 30, 202
 weapons of, 4, 181, 203, 460, 467
- commercial activities by, 660
- Egyptian, 67, 285, 289, 290, 307, 311, 312, 316, 529, 531, 534
- Indian, 74, 77, 217, 218, 223, 226, 230, 241, 242, 483
 Bahmani sultanate, 481
 Vijayanagara, 484
- Japanese
 private, 199
- Mongol, 160, 161, 232, 271, 288–290
- of Muslim Empire, 5, 6, 9, 30, 43, 44, 45, 60, 68, 69, 82, 111, 163
- Ottoman, 449, 516, 518
- Southeast Asian, 88, 253, 277, 504
 slaves in, 502
 Vietnamese, 512
- Tamerlane's, 297, 298, 515, 522
- aromatics, 198
 production of
 in China, 196
 trade in, 27

- art, 14
 Chinese, 22, 30, 188, 296
 East African, 338, 346, 362, 536
 European, 188, 445
 Islamic, 45
 Persian, 296
Arthasāstra, 627
 artisans, *see* craftsmen
 artists
 European
 status of, 445
 Ashikaga clan (Japan), 214
 astrolabes, 55, 67, 151
 astrology, 66, 67
 Malagasy, 576, 592, 593
 astronomical clocks
 Chinese, 168, 182, 189, 200, 205
 astronomy, 29, 200, 433, 439, 453
 Chinese, 168, 182, 189, 200, 205
 Indian, 55, 72
 in Muslim world, 65, 66, 67, 168, 200, 205, 285, 296, 439, 515, 571
 asynchrony with world-system, 644
 Austronesian languages, 126, 132, 395, 398, 400, 405, 406, 410, 411, 424, 426, 429, 585, 593, 601
 Austronesians, 186, 379, 628, 630
 attacks on Pemba, 17, 132–133
 migrations to Madagascar, 136, 177, 371, 372, 376, 377, 402–429, 555, 573–578, 647, 648; *see also* Zafiraminia people
 settlements of
 in Comoros, 14, 124, 125, 127, 368, 647
 in East Africa, 113, 117, 121, 122, 131, 132, 133, 135, 380
 in India, 135, 226, 410
 in Madagascar, 135, 138, 380, 402–429, 573–578, 647, 648
 in Persian Gulf region, 135, 141, 408
 trade by, 27, 37
 in East Africa, 117, 132–133, 379
 travels by
 to East Africa, 131–137, 379, 623
The Authentic Book of Stories of the Sea and Its Marvels, 60
 authoritarianism
 in China, 213, 459, 473
 Axial Age, 627
 Ayyāvoḷe guild, 85, 224–226, 228, 234, 236, 240, 246, 669
 Ayyūbid dynasty, 149–150, 177, 285, 299, 307–309, 321
 in Yemen, 320
 Bahrite dynasty, 299
 ballastella (“Jacob’s staff”), 164, 467
 bambara peas
 vocabulary on Madagascar for, 396
 bamboo plants, 126, 186, 191, 211, 405, 567
 descriptions of, 134
 bananas, 110, 131, 341, 623
 on Madagascar, 125, 385, 397, 398, 399, 429, 567, 647
 bankers, 675, 680, 683; *see also* merchant-bankers
 Egyptian, 301, 305, 314, 526, 676
 European, 152, 171, 172, 175, 437, 442, 603, 626, 682
 Indian, 242, 479, 483, 669, 676
 Jewish, 64, 301, 303, 305, 676
 in Muslim world, 56–58, 64, 65, 283, 305, 314, 669, 676
 banking, 672, 686
 emergence of, 622, 626, 668
 in Europe, 54, 152, 171, 437
 city-states, 165, 437, 441, 445, 663, 682
 crises in, 173, 177
 in India, 231, 238, 247, 295, 477
 in Muslim Empire, 54, 56–58, 305, 513, 668
 in Persian Gulf region, 56, 65, 66, 283
 banks, 281, 295
 European, 15, 171, 173, 175, 437, 443, 626, 685, 687
 Bantu languages, 106, 124, 349, 351, 396, 400
 influence on Malagasy, 132, 396, 397–400, 406, 586, 591, 595
 Bantu people, 124
 settlements of
 in Comoros, 124, 125, 369
 in Madagascar, 127, 138, 371, 391–402, 555, 562, 584, 611, 613, 647
 Banū Hatim tribe, 352
 Banu Hilāl tribe, 302
 Banū Majid tribe, 352
 Banū Najāh people, 317
 Banu Sulaym tribe, 302
 baobab trees
 in East Africa, 112
 in India, 365
 in Madagascar, 402
 Bardi firm, 171
 Barito language, 424
 bathing, ritual
 in Madagascar, 424
 beads, 170, 330, 331, 443, 653, 654
 in African interior, 114, 115, 116, 121, 334, 336, 338, 341, 365, 540, 551, 607
 Chinese, 89, 265, 336, 340, 360, 363
 in East Africa, 114, 115, 116, 121, 123, 133, 334, 335, 336, 338, 340, 354, 360, 363, 364, 375, 376, 537, 540, 541, 547, 654
 East African, 111, 117, 329, 334, 339, 354, 364
 Egyptian/Levantine, 92, 114, 363
 Indian, 9, 246, 479, 480
 spread of, 9, 15, 89, 90, 114, 121, 123, 259, 320, 334, 335, 338, 340, 354, 355, 360, 363, 375, 390, 533, 537, 540, 541, 566, 580, 604
 Malagasy, 374, 566, 568
 in Madagascar, 140, 142, 335, 338, 372, 374, 375, 376, 390, 564, 566, 580, 585, 599, 601
 from Persian Gulf, 113, 114, 116, 130
 Southeast Asian, 91, 264, 338, 566
 in Southeast Asia, 89, 90, 92, 93, 96, 114, 133, 259, 265
 Sri Lankan, 87, 114

- in West Africa, 52, 54, 116
 - in Yemen, 320
- Beishi*, 29
- Bencao gangmu*, 22
- Bengali language, 219, 398, 493
- Bengali people, 250, 278, 476, 493, 494, 498, 508
- benzoin, 90, 198, 250, 266, 498, 500, 663
- Berbers, 43
 - conversion to Islam of, 50, 53
- Betsileo people, 427
- Betsimisaraka dialect, 412
- Betsimisaraka people, 407, 413
- bhakti* cults
 - in India, 74
 - in Southeast Asia, 100
- Bible
 - interpretation of, 153
- Bill of Rights (America), 687
- bills of exchange, 223, 242; *see also*
 - hundi*; *suftaja*
- emergence of, 57–58
 - in China, 34–35, 156, 188, 201, 669
 - in Europe, 58, 171, 442
 - spread of, 171
- birds, 79, 126, 338; *see also* *Aepyornis*
- in Madagascar, 134, 379, 381–385, 389, 406, 569, 591
- black, *see* slaves: black; white–black distinction
- symbolism of
 - in Comoros, 406
 - in East Africa, 596
 - in Madagascar, 591, 596
- blast furnaces, 163, 436, 640
- bodhisattva figures, 89, 98
- Book of the Benefits of the Principles of Seamanship*, 494
- Book of the Chemistry of Perfume and Distillations*, 49
- Book of Curiosities*
- Book of Knowledge of Ingenious Mechanical Devices*, 286
- Book of the Marvels of India*, 60, 605
- Book of Military Horsemanship and Ingenious War Devices*, 294
- The Book of the Wonders of India*, 544
- book publishing, 463
 - in China, 20, 148, 181, 187, 189, 459, 471, 475
 - in Europe, 438
- book translations
 - in Europe, 55, 151, 154
 - in Muslim Empire, 6, 44, 66
- bookkeeping
 - double-entry, 171
- bourgeoisie
 - Chinese, 148, 182, 674
 - European, 153, 170, 437, 682, 683, 686
 - merchant, 58, 170
- Boxer Codex*, 279
- brahmādēyas*, 73, 85, 100, 221, 222
- Brahmins, 74, 75, 77, 82, 85, 221, 222, 484
 - land ownership by, 73, 85, 221, 222, 484
 - role/status of, 73, 74, 98, 222, 233, 264, 484, 678
 - in Southeast Asia, 95, 98, 264, 278, 678
- bronze, 22, 28, 88, 89, 91, 141, 187, 191, 228, 261, 302, 361, 403, 624; *see also* coins; mirrors
- importance of, 619, 620
 - objects in Africa, 52, 360
- Bronze Age, 153, 617, 619–620, 624, 651
- Buddha statues
 - in Southeast Asia, 89, 91, 93
- Buddhism, 35, 168, 627, 669; *see also* Vajrayāna Buddhism; Mahāyāna Buddhism
 - in China, 4, 5, 18, 22, 24, 26, 29, 30, 35, 205, 210, 678
 - decline of, 12, 35, 40
 - in India, 11, 29, 71, 74, 75, 76, 83, 84, 86, 226, 228
 - decline of, 75, 231
 - in Japan, 28, 199, 200
 - in Southeast Asia, 11, 84, 88, 89, 90, 92, 93, 94, 96, 97, 99, 100, 103, 231, 253, 254, 255, 257, 258, 262, 267, 270, 271, 272, 510, 589, 659
 - spread of, 3, 22, 28, 29, 33, 84, 93, 95, 97, 254, 628, 670
- in Sri Lanka, 253, 267, 270, 462
- buffaloes, 427
- Bulgars, 8, 9
- bureaucracies, 622, 674, 676
 - Chinese, 637, 640, 685
 - Ming period, 213, 434
 - Song period, 178, 202, 685
 - Tang period, 19, 32
- Egyptian, 310, 526
- European, 445
- Indian, 229, 487
 - Chola Empire, 223
- Japanese, 28
- Muslim world, 44, 67, 281, 321; *see also* Egyptian; Ottoman
- Ottoman, 517
- Roman, 629, 640
- size of, 640
- business agreements, *see*
 - commercial partnerships
- businesses, *see* private enterprises/firms
- Buyids, 69, 70, 113, 319, 345, 664
 - influences in East Africa of, 320, 345, 347–348, 351
- Cairo Geniza documents, 284, 301, 670
 - on Chinese exports, 184
 - on commercial partnerships, 55
 - on credit and banking, 56, 58
 - on Indian trade, 218, 219, 303, 305
 - on Jewish merchants, 301–306, 322
 - on monetization in Egypt, 530
 - on religious tolerance among merchants, 237, 305
 - on Yemeni trade, 303, 304, 318
- Caitra festival, 273, 276, 277, 278
- calendars, 182, 285, 423
 - Indian, 423, 424
 - Islamic, 498, 594
 - Javanese, 423
 - Malagasy, 404, 422–425, 577, 579, 593, 594, 649
 - Persian, 346, 347
 - Polynesian, 425
 - Swahili, 423

- caliphates/caliphs, 6, 13, 43
 Abbasid, 10, 11, 30, 33, 45, 46, 50, 58, 67, 149, 231, 280, 281, 282, 285, 289, 309, 317, 318, 667, 672, 673
 Shiite, 69, 149, 285, 300, 306
 Ummayyad, 11, 16, 25, 44, 50, 149, 150
 Calvinism, 670
 camels, 9, 23, 64, 72, 77, 197, 230, 266, 288, 313, 324, 385, 394, 527, 591, 620, 663
 canals
 in China, 20, 34, 40, 148, 175, 212, 434, 459, 639
 digging of
 in China, 4, 18, 23, 179, 206
 in Muslim world, 47, 50, 308, 446
 in India, 232, 244, 486
 in Southeast Asia, 255, 272, 276, 512
 cannons
 invention of, 173, 203
 production of, 172, 450, 455, 492, 507, 537, 603
 in China, 173, 203, 467
 use of, 163, 203, 449, 510, 516
 transmission of technology, 163, 510
 canon law, European, 152
 teaching of, 166
 capital accumulation, *see* wealth: accumulation of
 capitalism, 435, 442, 543, 641, 665, 672, 674, 677, 680, 681, 688, 689
 in Asia, 689
 conditions for, 435, 672, 673, 674
 destructive potential of, 690
 in Europe, 48, 166, 167, 171, 437, 439, 441, 442, 455, 617, 640, 670, 672, 677, 680
 financial phases, 627, 641
 global, 651, 665, 680–691
 and imperialism, 455, 679, 684, 688
 state involvement in, 680–691
 capitalist practices, 446, 617, 636, 672–680, 681; *see also* markets/market economies
 in Asia, 677, 685, 686
 Buddhist promotion of, 30
 in China, 156, 161, 178, 191, 192, 202, 452, 474, 673
 emergence of, 152, 679
 conditions for, 435, 670
 in Europe
 in city-states, 152, 153, 155, 166, 170, 437, 442, 674, 679
 development of, 152, 153, 155, 166, 170, 171, 434, 435, 441, 514
 and imperialism, 155, 455
 and feudalism, 152–153, 683
 in India, 226, 243, 247, 447, 448, 483, 488
 in Japan, 460
 in Muslim world, 58, 300, 304
 state involvement in, 622, 672–680
 caravan trade, 515; *see also* Silk Roads
 African, 7, 50, 51, 52, 54, 157, 159, 313, 314, 339, 440, 441, 519, 530
 Arabian, 55, 316, 527, 531, 532, 626
 Central Asian, 27, 164, 169, 229, 238, 239, 293, 516
 Egyptian, 303, 313, 315, 528
 on Madagascar, 555, 560, 649
 size of caravans, 313, 527
 in western Asia, 450, 515, 517
 carding bows
 use of, 234
 cargoes, 284, 453, 460, 478, 491, 504, 508
 Chinese, 187, 206, 460
Carita Parahiyangan, 98
 cartography
 Arab/Muslim, 136, 137, 271, 380
 on Madagascar, 569–572
 Chinese, 195, 196, 210, 464, 465, 466
 European, 163, 172, 348, 384, 411, 445, 446, 497, 553, 561, 562, 602, 610
 Indian, 488
 Korean, 196, 446, 463, 467
 carts, horse-drawn, 624
 Casa da India (trading company), 454, 604
 Casa di San Giorgio (bank), 437, 604
 caste system in India, 74, 234, 237, 686
 development of, 77, 85
 among Muslims, 237
 castor plants
 on Madagascar, 143
Catalan Atlas, 172
 Catalans, 311, 439, 523
 Cathar movement, 151
 Catholicism; *see also* popes
 in China, 170, 210, 293
 in Europe, 7, 19, 151, 152, 153, 154, 166, 167, 170, 171, 175, 200, 205, 289, 438, 439, 442, 444, 445, 451, 670
 cattle; *see also* zebus
 breeding of
 in Comoros, 126
 in East Africa, 110, 116, 140, 331, 334, 338, 358, 360, 542, 545, 554
 in Madagascar, 140, 373, 386, 389, 393, 394, 395, 427, 428, 560, 581, 582
 ecological impact of rearing of, 373
 humpless
 in East Africa, 140
 on Madagascar, 394
 cavalry
 in Central Asia, 20, 297
 in China, 20
 in Egypt, 306, 531
 in Europe, 7, 451
 in India, 77, 241
 cemeteries, 184, 199, 209; *see also* tombs
 in East Africa, Muslim, 109, 335, 352
 in Madagascar, 377, 393, 559, 564, 583
 centralization/decentralization, *see also* states
 in cores, 633, 640
 decentralization of capital, 641, 663
 ceramics, *see also* porcelain
 Chinese, 320
 in Arabia, 60, 317, 319, 320, 521

- on Comoros, 130, 141, 367, 449, 553
- in East Africa, 113, 119, 317, 353, 354, 360, 363, 449, 536, 537, 538, 540
- in Egypt/Yemen, 59, 70, 306, 317
- in India/Pakistan, 59, 86, 227, 233, 239, 240, 248, 250
- on Madagascar, 140, 141, 355, 371, 375, 376, 377, 386, 387, 388, 390, 449, 557, 559, 565, 566, 582, 583, 584
- in Persian Gulf region, 59, 284, 295
- production of, 27, 40, 161, 181, 188, 208
- in Southeast Asia, 28, 89, 92, 94, 96, 102, 104, 258, 259, 260, 261, 262, 265, 279, 503
- on Comoros, 126–131, 367
- in East Africa, 112, 121, 123, 344, 354, 363, 367, 537
- Chinese, 113, 119, 317, 353, 360, 363, 536, 537
- from Persian Gulf, 109, 110, 112, 113, 114, 116, 118, 130, 132, 284, 345, 346, 348, 353, 360, 537
- East African, 106–107, 109, 112, 113, 114, 119, 120, 127, 128, 143, 319, 320, 334, 340, 347, 364, 390, 538, 551
- Indian, 375
 - in East Africa, 121, 123, 354
 - in Southeast Asia, 90, 94
 - spread of, 60, 121, 130, 319
- on Madagascar, 127, 129, 139, 140, 141, 143, 355, 371, 375, 376, 377, 378, 386, 387, 388, 389, 391, 394, 557, 559, 565, 566, 582, 583, 584
- Malagasy, 129, 139, 140, 142, 373, 378, 385–390, 559, 568, 578, 580, 581, 582, 583
- of Muslim world
 - exports, 27, 28, 60, 61–62, 81, 82, 86, 87, 89, 90, 92, 94, 96, 104, 109, 110, 112, 113, 114, 116, 118, 130, 132, 139, 140, 141, 228, 258, 284, 317, 319, 320, 346, 348, 353, 360, 367, 371, 375, 376, 378, 386, 387, 389, 390, 391, 394, 537, 559, 584
 - imports, 59, 294, 295, 306
 - production, 49, 61, 62, 282, 519
 - in Southeast Asia, 62, 89, 90, 92, 94, 96, 102, 104, 228, 258, 259, 261, 262, 265, 503
 - Southeast Asian, 91, 256, 259, 261, 264, 273, 363, 503, 510, 511, 512, 536
 - in Yemen, 113, 317, 319, 320, 347, 521
 - Yemeni, 295, 367, 533, 537
 - in East Africa, 353, 363, 367, 537
 - on Madagascar, 367, 375, 378, 387
- certificates of deposit; *see also* credit notes; *sufṭaja*
- emergence in China of, 34, 188
- Chachnama*, 60
- Chāhamāna/Chauhan, 76, 77, 78, 216, 217, 229, 230
- Chālukya dynasty (from Bādāmi), 79–80
- Chālukya dynasty (Gujarat), *see* Solanki dynasty
- Chālukya dynasty (from Kalyāna), 80, 216, 220–221, 224, 228, 232
- Cham language, 380, 410
- Cham people, 93, 96, 270, 274, 380, 423, 512
- Chandela dynasty, 78, 216, 229, 233
- Chandra dynasty, 94, 228
- charms, Malagasy
- checks, use of, 442
 - in India, 242
 - in Muslim world, 52, 56, 58, 281
- Chera dynasty, 80, 87, 103, 218, 225, 226, 630
- Chetti merchants, 224, 236, 246, 247, 271, 446, 487, 490, 512
- chickens
 - introduction in East Africa, 126, 131
- chiefs
 - of merchants, 301, 319, 673
- Chinese
 - in Central Asia, 23, 29, 293
 - in East Africa, 355, 536
 - in India, 75, 209, 210, 248, 250, 355
 - in Southeast Asia, 88, 99, 169, 207, 214, 215, 255, 258, 263, 270, 272, 274, 275, 276, 277, 278, 435, 462, 469, 496, 498, 502, 503, 504, 510
 - Brunei, 469, 498
 - communities of, 209, 272, 274, 277, 462, 496, 497, 498, 502, 503, 507, 508, 510
 - Malacca, 469, 506, 508, 603, 604
- chivalry, 229
- chlorite schist, 142
 - exploitation and working of
 - in Madagascar, 141, 142, 374, 377, 378, 394, 403
 - objects/presence of
 - in Comoros, 125, 130, 142, 553
 - in East Africa, 121, 128, 141, 142, 339, 377, 382
 - in Madagascar, 139, 140, 141, 142, 143, 374, 376, 377, 378, 386, 388, 403, 559, 564, 568, 583, 601
 - trade in, 339, 374, 377, 538
- Chola dynasty, 16, 17, 80, 83, 85, 87, 91, 103, 149, 184, 214, 221–228, 232, 236, 238, 239, 240, 254, 262
- Chola people, 87, 149, 221–228, 236, 250, 253, 258, 262, 335, 354, 386, 460, 488, 551
- Christianity/Christians; *see also* Monophysite Christianity; Nestorian Christianity/ Nestorians

- Christianity/Christians (*cont.*)
 in Byzantine Empire, 9, 14, 154
 and capitalist
 development, 670
 in Central Asia, 61, 164
 in China, 5, 30, 35, 36, 63, 205,
 209, 210
 conversion to, 14, 15, 53, 659
 in Africa, 53, 158, 454, 638
 in Egypt, 43, 299, 301, 308,
 312
 emergence of, 637
 in Ethiopia, 53, 162, 307, 451
 European, 7, 19, 151, 152, 153,
 166, 167, 175, 286, 293,
 444, 445, 451, 455
 Greek, 151
 in India, 63, 83, 226, 236, 305,
 491, 609
 in Iran, 290
 and Islam, 8, 167, 285, 307, 450,
 453, 455
 in Levant, 43, 285, 306, 307
 spread of, 14, 15, 659, 671
 Syriac, 83
Chronicle of Kilwa, 344, 345, 346,
 348, 349, 350, 360, 560,
 596
Chronicle of the Kings of Pasai,
 268, 277
 chronologies, 619
 ultra-short, 620, 623
 Circassians
 Egypt ruled by, 316
 circumcision
 on Madagascar, 407
 cities, 618, 627, 630, 634, 645, 668,
 671, 679, 680, 686; *see*
 also city-states
 Arabia, 60, 300, 317, 321, 322,
 328, 533, 625
 Central Asian, 10, 281, 297,
 516, 678
 Chinese, 10, 20–21, 26, 148, 156,
 166, 180, 190, 202, 205,
 207, 208–209, 210, 434,
 459, 624, 626
 Comorian, 366, 370
 cosmopolitanism, 62, 170, 278,
 322, 448, 501, 506, 533,
 548, 671
 East African, 341; *see* city-states
 Egyptian, 69, 301, 307, 312, 313,
 316, 523
 European, 7, 16, 150, 152, 153,
 155, 164, 165, 166, 171,
 293, 436, 441, 443, 444,
 625, 629, 672
 Indian/Pakistani, 60, 73, 76, 83,
 85, 166, 222, 226, 236,
 242, 447, 477, 478, 486,
 490, 491
 Japanese, 156, 460
 Malagasy, 371, 374–376,
 558–560, 563–564, 615
 Muslim world (western Asia),
 6, 10, 44, 45, 48, 59, 68,
 69, 153, 166, 281, 282,
 291, 515, 519
 North African, 43, 51, 439
 Southeast Asia, 88, 89, 90, 94,
 156, 278, 448, 497, 498,
 500–501, 502, 503,
 504–509
 citizenship, 155, 625, 629, 682
 city-states, 501, 618, 626, 679
 Asian, 433, 447, 487, 679
 capitalist development in, 171,
 172, 447, 640, 678, 679,
 681, 682, 688
 Central Asian, 110
 East African, 329–332, 341–345,
 356–358, 538–539,
 548–551
 competition among, 350, 351,
 352, 353, 357, 362,
 539, 548
 exploitation of peripheries
 by, 330–332, 542–546,
 662
 government/administration
 of, 339, 347–351, 352,
 357–358, 361, 538, 539,
 550–551
 strategies/alliances of, 331,
 340, 344, 357, 358, 364,
 546–547
 European, 153, 166, 171, 172, 441,
 447, 635, 661, 674, 679,
 681, 682, 684, 688
 Greek, 625–626, 684, 688
 Italian, 14, 56, 154, 155, 170,
 171, 172, 173, 437, 441,
 442, 443, 640, 669, 679
 strategies of, 442, 447, 455,
 461, 679
 Indian, 93, 447, 477, 483,
 490, 491
 Islamic, 292, 442, 519–520, 688
 Malagasy, 139, 371, 374–375,
 376–377, 558, 560,
 563–564
 Southeast Asian, 11, 89, 94, 259,
 448, 504–509,
 513–514, 662
 civilization concept, 618
 civilizing missions
 of Chinese, 461
Civitates Orbis Terrarum
 climate changes, 642, 643; *see also*
 aridization; cooling;
 warming
 in Africa, 4, 160, 288, 336, 337,
 338, 449
 in Central Asia, 3, 160, 174,
 288, 642
 in China, 3, 20, 36, 435, 472
 and systemic cycles, 619, 631,
 642, 643
 in Egypt, 12, 147, 157, 173,
 299, 449
 in Europe, 3, 4, 14, 15, 147, 150,
 157, 299
 global, 3, 4, 12, 14, 147, 157, 159,
 160, 169, 173, 214, 288,
 327, 341, 433, 435, 449,
 620, 623, 625, 628,
 631, 690
 in India, 79, 147, 160, 173,
 242, 244
 on Madagascar, 371, 373, 388
 and solar activity, 147, 148, 174,
 300, 433, 435, 472,
 619, 642
 in Southeast Asia, 273
 in western Asia, 12, 69, 280,
 285, 291, 296, 623
 clocks
 importance of
 in Europe, 165
 production of
 in China, 182
 in Europe, 164, 165
 clock-towers
 in China, 183
 clothing
 in China, 23, 29
 East Africa, 330, 347, 549, 654
 Europe, 444
 Indian, 235, 242, 487
 Muslim, 48, 234
 Southeast Asian, 102, 500

- cloves
 in Madagascar, 574–575, 610, 613
 trade in, 27, 90, 103, 184, 198, 211, 225, 235, 250, 252, 264, 266, 297, 443, 444, 445, 507, 510, 527, 623, 628
- cobalt, 27, 208, 259, 375
- coconut trees/coconuts, 126, 325, 403, 575
 in East Africa, 110, 120, 122, 355, 547
 in West Africa, 159
 in Maldives, 60
- coevolution, 109, 329, 332, 634, 650, 659, 661–665
- coffee
 consumption of, 533
- coins; *see also* minting
 Byzantine, 44, 162
 Central Asian, 44, 77, 78, 217, 229, 230
 Chinese, 5, 21, 28, 30, 33, 34, 35, 148, 156, 161, 182, 185, 186, 188, 194, 200, 201, 204, 213, 434, 452, 458, 459, 473, 474
 in Asia, 184, 188
 in East Africa, 38, 119, 123, 131, 354, 356, 549
 exports of, 156, 184, 185, 186, 195, 200, 201, 204, 261, 272, 279, 460, 470, 644
 in India, 250
 in Persian Gulf, 40
 in Southeast Asia, 92, 184, 201, 255, 256, 259, 260, 261, 265, 272, 273, 279, 458, 513
 in Sri Lanka, 239
 in East Africa, 38, 109, 119, 123, 131, 348, 354, 356, 549
 East African, 110, 119, 120, 121, 342, 345, 346, 347, 352, 360, 361, 363, 366, 547
 Egyptian, 51, 53, 81, 173, 248, 302, 328, 348, 491, 522, 524, 529
 emergence of, 626
 European, 8, 44, 248, 314
 in India, 248, 249, 250, 262, 491
- Indian, 44, 77, 78, 79, 81, 84, 94, 217, 218, 223, 224, 228, 229, 230, 231, 232, 235, 237, 238, 244, 245, 249, 480, 483, 486, 489, 492
 spread of, 235, 354
- Islamic, 10, 16, 44, 51, 68, 69, 70, 81
 spread of, 15, 44, 94, 109, 120
- Italian, 165, 170, 173, 314, 442, 524
 spread of, 314, 491, 524
- in Japan, 184, 185, 200, 201, 460
- in Madagascar, 566
- in Southeast Asia, 255, 256, 259, 260, 261, 265, 272, 279, 470, 513
- Southeast Asian, 92, 93, 94, 95, 101, 260, 265, 279, 498, 513
- Javanese, 98, 101, 102, 259, 264, 265, 272, 279
- Malaccan, 497, 513
- Sumatran, 259, 260, 262, 268, 497
- Vietnamese, 96, 256, 257, 273
- Yemeni, 248, 318, 321, 324, 328
- colonial enterprises/colonialism, 155, 172, 609, 659, 662
- colonization, 662
 in China, 34, 147, 178, 213, 468
 in India, 486
 Viking, 15
- color symbolism
 in Africa, 596
 Malagasy, 416
- commenda* partnerships, 623
 in China, 195
 in Europe, 56, 165, 195, 524
 in Muslim world, 55, 56, 57
 in Southeast Asia, 508
- Commentaries*, 575
- Commentários do Grande Afonso Dalboquerque, Capitam Geral que foy das Indias Orientaes*, 610
- Comments on Pāṇini's Grammar*, 77
- commercial law, 54–57, 222, 670, 674
 in Southeast Asia, 513–514
- commercial partnerships, 508, 524, 622, 623, 678–680;
 see also commenda
 partnerships
 in China, 180, 195, 475
 in East Africa, 331, 357, 364
 in Egypt, 303, 304, 309, 314, 523, 524
 in India, 224
 in Muslim Empire, 55–57
 in Yemen, 304, 305, 326
- commercial techniques, *see*
 banking; bills of
 exchange; credit; com-
 mercial partnerships
- Comorian language, 106, 124, 125, 368, 394, 396, 400
 influences on Malagasy
 language, 397, 429
- companies; *see* private
 enterprises/firms
- comparative advantages
 theory of, 651
 use of
 in China, 192
- compasses, 453
 invention of, 164
 transmission of knowledge of, 151, 167, 200, 286, 634
 use of
 in China, 148, 186, 635
 in India, 236
- The Compendious Book on Calculation by Completion and Balancing*, 54
- Compendium Cosmographiā*, 433
- competition
 among African kingdoms, 158
 among East African city-
 states, 341, 347, 357, 362, 536, 539
 for government employment, 28, 44, 147, 178
 among states, 87, 227, 232, 254, 256, 277, 478, 483, 498, 626, 627, 639, 640
 among European states, 286, 437, 438, 514, 641, 674, 681–682

- competition (*cont.*)
 among world-systems, 685
 in world-systems, 650, 655, 658, 664, 671
- Concordia discordantium canonum*, 152
- Confucianism, 32, 35, 175, 185, 189, 191, 192, 213, 214, 257, 463, 468, 471, 511, 627, 637, 638, 644, 673, 686, 687, 688;
see also neo-Confucianism
- conscription
 in China, 30
- constitutional government
 emergence of, 153, 686, 687
- consuls/consulates, 153, 301, 679
- conversion
 to Buddhism, 3
 in India, 228
 to Christianity, 14, 53, 638, 659
 to Islam, 44, 45, 50, 54, 67, 108, 150, 158, 209, 237, 267, 280, 351, 408, 448, 500, 505, 541, 548, 563, 615, 670
 of East African elites, 52, 108, 157, 313, 330, 440
 in India, 81, 82, 237, 489, 493
 by rulers, 10, 157, 243, 289, 294, 312, 313, 408, 448, 500
 to Judaism, 9
 to religion of core areas
 by elites in peripheries, 330, 659, 662
- cooling
 global, 12, 159, 160, 174, 269, 288, 300, 435, 472, 625, 642, 643
 in China, 12, 36, 160, 288, 472
 in Eurasian steppes, 159, 288, 642
- copal trade, 14, 114, 120, 320, 363, 620
 in Madagascar, 394, 613
- copper
 exchange rates for gold, 200
 imports, 158, 170, 187, 200, 201, 202, 320, 323, 340, 354, 463, 480, 522, 624, 669
 in India, 235, 250, 486, 491, 525, 530, 533, 669
 mines/exploitation, 60, 68
 in Africa, 114, 115, 117, 158, 313, 334, 337, 441, 540, 546
 in China, 156, 458
 production/copperworking, 49, 52, 115, 116, 117, 158, 184, 267, 303, 337, 471, 520, 540
 shortages
 in China, 34, 194, 204
 trade in, 443, 522, 619, 624, 668, 669
 in Africa, 114, 115, 117, 158, 159, 170, 313, 337, 338, 342, 360, 443, 522, 540, 567
 in Asia, 200, 207, 235, 250, 261, 463, 504, 619, 669
 Chinese, 184, 202, 470, 644;
see also coins
- copper plates, 76, 83, 84, 104
- Copts, 43, 44, 162, 308, 310, 312
- coral
 beads, 566
 trade in, 26, 27, 182, 188, 197, 198, 208, 225, 266, 302, 303, 323, 491, 525, 579
 use of
 as building material, 121, 341, 342, 348, 357, 361, 648
 for decoration, 346, 362, 370, 374, 536, 552, 553, 557, 558, 564, 649
- cordyline fruticosa* plant
 on Madagascar, 568
- cores (of states, empires), 68, 358, 624
 in India, 76, 78, 169, 222, 228, 242, 486
- cores of world-systems
 in Afro-Eurasian world-system, 629, 633–634
 dominance of, 109, 329–331, 356, 500, 545, 546, 636, 638, 642, 650–660, 662
- environmental problems
 of, 642
- exports of, 48, 330, 331, 545–546, 636, 651, 653, 654
- of first world-systems, 618, 619, 623
- imports, 330, 331, 332, 359, 545, 546, 654, 655
- labor force in, 651
- multicentered, 72, 619, 639, 645
- and peripheries; *see also* peripheries
 alliances with elites (of peripheries and semi-peripheries), 11, 108, 109, 330, 652, 654, 659, 662
 exploitation of, 157, 330–332, 545, 642, 651–656, 662
 interactions with, 331, 657–660, 661–665
 trade relationships, 330, 331, 545, 546, 636, 650–658, 662
- semi-peripheries taking power in, 663–664
- semi-peripheries turning into, 455, 666
- synergy between, 625
- technology transfers from, 10, 151, 163, 167, 168, 181, 200, 234, 236, 241, 294, 329, 641, 662
- weakening of
 recessions in, 526, 634, 639–645
- Corpus Juris civilis*, 55
- corvée
 in East Africa, 544
 in China, 20, 35, 213, 459, 474
 in Southeast Asia, 103, 274, 509, 512
- cosmology, 297
 Mesopotamian, 618, 619
- cosmopolitanism
 in East Africa, 548
 in Central Asia, 25
 in China, 5, 11, 23, 205
 of cities, 501, 671
 in Hormuz, 519
 in India, 447, 486
 in Java, 278, 448, 501
 in Malacca, 506
 of merchant networks, 50, 168, 267, 486, 498, 501
 in Muslim world, 50, 168, 267, 448, 498, 624
 of ports, 11, 62, 170, 278, 448, 501
 in Sri Lanka, 462
 in Yemen, 322, 533

- cotton
- cultivation of
 - in China, 34, 156, 161, 190, 203, 471, 472, 474, 684
 - in East Africa, 112, 329, 364
 - in India, 231, 477, 486
 - in Muslim world, 47, 282
 - in Southeast Asia, 101, 497, 510
 - production/fabrics
 - in China, 194, 203, 452, 471, 472, 475, 497, 498
 - in East Africa, 336, 364, 540, 548
 - in Europe, 172, 443, 684
 - in India, 73, 80, 184, 198, 208, 218, 234, 235, 242, 246, 258, 264, 268, 278, 318, 323, 325, 340, 354, 447, 448, 477, 480, 487, 491, 492, 506, 507, 520, 537, 540, 541, 548, 579, 653
 - in Madagascar, 559, 599, 615
 - in Muslim world, 48, 197, 266, 301, 318, 323
 - in Southeast Asia, 101, 198, 252, 261, 500, 510
 - trade in, 15, 25, 26, 48, 62, 80, 101, 172, 184, 197, 208, 218, 235, 242, 246, 258, 261, 264, 266, 267, 268, 278, 283, 301, 318, 321, 325, 330, 340, 354, 443, 447, 448, 480, 487, 491, 492, 494, 498, 500, 506, 507, 519, 520, 537, 540, 541, 543, 548, 567, 579, 607, 653
- Council of Constance, 445
- cowpeas
- vocabulary on Madagascar for, 396
- cowries
- monetary use of, 237, 492, 494, 669
 - in East Africa, 117, 342, 547
 - in West Africa, 158, 159, 250, 440, 494, 519
 - in China, 237
 - in India, 60, 73, 83, 84, 218, 228, 250, 492, 494
 - in Madagascar, 601
 - in Southeast Asia, 33, 270, 494, 510
 - presence of
 - in East Africa, 114, 115, 117, 335, 336, 340, 342, 360, 365, 551
 - in West Africa, 54
 - in Europe, 8
 - in Southeast Asia, 237
 - in Madagascar, 389
 - trade in, 8, 54, 60, 73, 117, 158, 159, 218, 228, 237, 250, 335, 336, 340, 360, 365, 494, 510, 519, 547, 551
- craftsmen
- in Central Asia, 45, 46, 203, 293
 - Chinese, 5, 27, 29, 31, 45, 46, 180, 182, 187, 189, 191, 192, 203, 213, 293, 459, 565
 - deportation of, 31, 45, 203, 255, 289, 297, 518, 636
 - in East Africa, 358, 359
 - Egyptian/Syrian, 29, 283, 301, 518, 522
 - European, 164, 165, 436, 475, 627, 683
 - Indian, 80, 116, 118, 123, 205, 217, 225, 226, 233, 234, 241, 255, 479, 484, 485, 487, 488, 684
 - in Iran, 5, 116, 289, 291, 481
 - in Muslim Empire, 31, 45, 49
 - in Ottoman Empire, 450, 517
 - Southeast Asian, 265, 276, 566
- credit
- instruments/techniques
 - in China, 12, 30, 34, 156, 180, 192, 194, 201, 213, 669
 - emergence of, 622, 626
 - in Europe, 152, 170, 171, 437, 442, 674
 - in India, 72, 238, 242, 479, 487, 669
 - in Muslim world, 54, 55, 56, 57, 158, 283, 513, 669
- partnerships; *see commenda partnerships*
- use of
- in China, 192
 - in Muslim world, 55
- credit notes; *see also bills of exchange*
- in China, 12, 34, 156, 194, 201, 669
 - in Europe, 57, 66, 170, 171, 437, 442, 626, 669
 - in India, 57, 238, 242
 - in Muslim world, 52, 56, 57, 58, 64, 283, 669
- crews, 288
- of Chinese ships, 195, 197, 206, 211, 365, 434
 - of Indian ships, 364, 491, 606
 - of Southeast Asian ships, 89
- croisettes, 115, 337
- Cronica do descobrimento*, 613
- crop rotation systems, 6, 8, 47, 150, 436
- crossbows
- in China, 20, 23, 148, 181, 627
 - in Europe, 10
 - in India, 241
- Crusades, 7, 149, 151, 154, 155, 163, 170, 175, 284, 285, 286, 291, 293, 301, 306, 307, 309, 310, 313, 444, 451
- Cūlavamsa*, 254
- cults, devotional
- in India, 74, 100
- cultures
- fringe, 422
 - in East Africa, 110
 - on Madagascar, 645–650
- currencies, 657, 669; *see also* coins; cowries; paper money
- in East Africa, 110, 115, 117, 119–120, 170, 337, 342, 345, 346, 348, 352, 355, 361, 363, 366, 540, 543, 547
 - in West Africa, 158, 159, 440
- Central Asian, 78, 216, 229
- change of, 55, 57, 58, 90, 250, 283
- Chinese, 5, 20, 21, 30, 33, 34, 36, 38, 40, 131, 148, 156, 161, 182, 184, 186, 188, 194, 195, 200, 201, 202, 204, 213, 237, 239, 250, 259, 261, 272, 279, 354, 355, 434, 452, 458, 460, 470, 474, 510, 549, 657
- Egyptian, 173, 248, 302, 314, 491, 524, 529, 530
- European, 15, 44, 162, 165, 170, 173, 248, 314, 442, 443, 491, 524

- currencies (*cont.*)
- Indian, 77, 78, 79, 81, 82, 84, 94, 173, 217, 218, 223, 224, 228, 229, 231, 232, 235, 237, 238, 244, 245, 250, 354, 480, 486, 489, 492
 - international, 165, 184, 188, 201, 204
 - and power relations, 657
 - in Japan, 28, 184, 200, 470
 - Malagasy, 377, 580, 599–601
 - Muslim world, 7, 10, 15, 16, 44, 51, 55, 57, 58, 60, 68, 70, 109, 120, 520
 - in continental Southeast Asia, 92, 93, 94, 95, 184, 255, 256, 257, 260, 270, 273, 510, 513
 - in insular Southeast Asia, 90, 98, 101, 102, 184, 201, 259, 260, 261, 265, 268, 272, 279, 497, 498, 504, 513
 - Yemeni, 248, 321, 324, 532, 534
- customs duties
- in China, 26, 193
 - in East Africa, 330, 548
 - in Egypt, 303
 - in India, 491, 506, 606
 - in Ottoman Empire, 517
 - in Persian Gulf region, 519, 520
 - in Southeast Asia, 505, 506
 - in Yemen, 318, 321, 323, 524
- customs offices
- Chinese, 182, 193, 214
 - Hormuz, 520
 - Yemen, 240, 302, 321, 322, 326, 327, 531
- cycles
- climatic, 619, 642, 643; *see also* climate changes
 - economic, 630, 680
 - solar, 619, 642, 643
 - systemic, 619
 - in Afro-Eurasian world-system, 168, 175, 434, 617, 630, 633, 634, 639, 642, 643, 645, 658, 665, 671, 680
 - in capitalist accumulation, 640, 641, 690
- Da Asia, 603
- Dai Viet Su Ky Toan Thu, 98, 273
- Daoism, 29, 30, 189, 662, 687
- Daoyi zhibiue*, 208, 210, 275
- Dasakumacarita*, 219
- Daxue yanyi bu*, 474
- De Materia Medica*, 325
- De Modo Sarracenos Extirpandi*, 325
- debt, 173, 301, 437, 513, 523, 622, 657
 - cancellation of, 294, 622
 - notes, 56, 57, 64, 171, 201, 473
 - transfer of, 56, 57
 - relations, 332
- Declaration of the Rights of Man and Citizen, 687
- deflation, 470
 - in Europe, 174
- deforestation, 640, 642
 - in China, 180, 202, 468
 - in Madagascar, 373
- Dembeni people, 124, 126, 129, 130
- democracy, European, 153, 627, 637, 686, 687, 688
- demographic declines
 - in China, 160, 161, 174, 203, 472
 - in Europe, 174
 - global, 13, 16, 174, 433
 - in Madagascar, 389
 - in western Asia, 290, 515
- demographic growth, 630, 634, 639, 640, 641, 650, 665, 671
 - in China, 10, 20, 147, 160, 179, 458, 685
 - in East Africa, 336, 341
 - in Egypt, 300, 312
 - in Europe, 14, 150, 438, 455
 - global, 10, 433, 434, 436, 446
 - in India, 10, 147, 240
 - in Japan, 174
 - in Madagascar, 341, 429, 555, 556, 578
 - in Southeast Asia, 147, 264, 270, 273, 275, 509, 512
- demographic pressure, 436, 453, 635, 641, 685, 690
 - in Muslim Empire, 12, 48
- deportations
 - in China, 213
 - of craftsmen
 - by Mongols, 289
 - by Ottomans, 518
 - by Tamerlane, 297
 - in India, 243
 - Muslim Empire, 68
- of Turks
 - to China, 23
- de-urbanization
 - in Afro-Eurasian world-system, 13
 - in India, 11, 72, 73
 - in Iran, 516
 - in Muslim Empire, 644
 - in Yemen, 522
- devaluations
 - in China, 161, 194, 201, 202, 204
 - in Egypt, 524
 - in India, 77, 173, 232, 473
- Devisement du monde*, *see* Marco Polo
- diasporas, 655, 656, 670, 678
 - and capitalist development, 678
 - Iranian, 319
 - Jewish, 8, 282, 670
 - of merchants, 656
 - Sogdian, 31
- Dictatus papae*, 152
- Dictionary*, 600, 601
- Dictionnaire des peuples*, 395
- diplomatic relations
 - of China
 - with Central Asia, 18, 23, 25, 185, 190, 460, 471, 516
 - with East Africa, 347, 461, 552
 - with Egypt, 170, 456, 469
 - with India, 24, 25, 86, 184, 214, 226, 227, 236, 240, 245, 250, 461, 493
 - with Iran, 18, 23, 24, 205, 213, 471, 520
 - with Japan, 185, 461
 - with Muslim world, 25, 31, 33
 - with Southeast Asia, 16, 18, 24, 35, 37, 38, 88, 89, 91, 93, 96, 98, 99, 103, 132, 183, 227, 255, 256, 260, 262, 265, 266, 270, 271, 274, 276, 277, 278, 461, 470, 498, 504, 505, 511
 - of Egypt, 170, 311, 312, 326, 327, 456, 469, 523, 524
 - of India, 24, 25, 79, 86, 184, 214, 226, 227, 236, 240, 245, 250, 312, 324, 328, 461, 485, 491, 493, 523
 - of Iran, 18, 23, 44, 79, 205, 213, 471, 485, 491, 520

- of Italian city-states, 443, 516, 518
 - of Java, 24, 35, 37, 38, 98, 103, 132, 274, 276, 277, 278, 470, 504
 - of Malacca, 471, 505
 - of Yemen, 311, 316, 324, 326, 327, 328, 353
- diplomats
 - merchants, 65, 185, 316, 524, 676
- discoveries
 - of Americas, 609
 - of Madagascar
 - by Portuguese, 610
- diseases; *see also* epidemics
 - resistance of Africans
 - against, 552
- distillation
 - of alcohol
 - in China, 22
 - in Europe, 151, 152, 200, 287
 - in Muslim world, 49, 152, 287
 - for perfume production, 49
 - vessels used for, 152
- Diversion for the Man Longing to Travel to Far-Off Places*, 135
- divinations
 - Malagasy, 590, 592, 594
- divinization
 - of rice
 - on Madagascar, 428
 - of rulers/kingship, 25, 598
- dogs
 - as symbols of life, 399
 - presence of
 - in East Africa, 131
 - in Madagascar, 390
- donations to religious institutions
 - in India, 73, 76, 84, 220, 222, 225, 226, 228
 - in Muslim world, 249, 282, 310, 325, 530, 532
 - in Southeast Asia, 94, 240, 253, 254, 255, 256
- dowels, 27, 292
 - use of
 - in Southeast Asia, 263, 276
- dragons/monsters
 - myths on, 408
- dress styles; *see also* clothing
 - East African, 549
 - durum wheat
 - spread of, 47
 - Dutch East-India Company (VOC), 172, 225
 - Dyula people, 158, 440, 545
 - ecological crises, 331, 638, 658, 689, 690
 - in Africa, 539
 - in China, 468
 - in Muslim Empire, 12, 69
 - in Southeast Asia, 269, 274
 - economic declines, *see* recession
 - periods
 - economic growth
 - capitalist, 688–690
 - global, 3, 17, 40, 147, 155, 159, 169, 175, 203, 324, 355, 356, 433, 446, 509
 - innovations in period of, 7, 21, 148, 163, 179, 182, 188, 234, 287, 509, 634, 635–637, 651, 667, 668, 683, 688, 689, 690
 - and political integration, 4, 6, 8, 17, 18, 147, 178, 234, 446, 626, 628, 629, 639, 660, 672
 - trade induced, 7, 14, 148, 155, 156, 179, 182, 192, 194, 263, 338, 436–437, 483, 489–491, 492, 494, 504, 505, 634, 668, 670, 683
 - and urbanization, 48, 148, 150, 164, 180, 281, 341, 436, 446, 634, 645, 671
- economic rationality
 - emergence of, 627, 672
 - in China, 637
- economy
 - state control over, 109, 517, 604, 675
 - in China, 21, 26, 32, 182, 187, 188, 201, 204, 452, 463, 474, 674
 - in Egypt, 300, 301, 447, 525, 528, 624, 675
 - in India, 223, 242
 - in Muslim Empire, 49
 - in Southeast Asia, 262, 265, 278, 497, 503
 - in Yemen, 308, 322, 328
- education, 686
 - in China, 19, 156, 166, 178, 189, 191, 202, 212, 213, 474, 511, 637
 - in Europe, 7, 15, 19, 151, 152, 166, 171, 286, 444, 445, 637, 639, 684, 686
 - in India, 85, 231
 - in Muslim world, 16, 66, 166, 282, 285, 529
- eels
 - offerings to, 407
 - taboo on eating of, 407
- efflorescences, 7, 633, 634, 638
- Egerton manuscript, 553, 569
- eggplants, 47
- El Niño phenomenon (ENSO), 12, 147, 160, 174, 449, 643
- Elements*, 65
- elephants; *see also* elephant tusks
 - statues of, 403
 - trade in, 87, 224, 225, 236, 241, 250, 254, 260, 477, 486, 491, 537
 - use of, 72, 79, 83, 667, 675
- elephant tusks, 96, 111, 116, 134, 187, 198, 243, 252, 261, 273, 291, 332, 340, 385, 540, 545, 569
- elites, 109, 543, 551, 618, 638, 655, 668, 674, 675, 676, 678; *see also* aristocracies
 - African (interior), 115, 331, 334, 336, 360, 542, 544, 545
 - in China, 12, 31, 32, 148, 156, 169, 179, 180, 182, 185, 202, 213, 435, 452, 472, 473, 674
 - in cores, 640, 650, 651, 659
 - East African, 11, 107, 108, 118, 330, 351, 538, 546, 551, 654, 662
 - dress styles of, 347, 540, 549, 654
 - Muslim, 108, 330, 344, 662
 - privileges of, 351, 551
 - wealth of, 351, 361, 549
- Egyptian, 314–316, 525
- European, 153, 169, 170, 437, 509, 672, 682, 683, 686
- of city-states, 155, 441, 444, 447

- elites (*cont.*)
- Indian, 77, 85, 218, 220, 221, 222, 224, 234, 237, 239, 242, 482, 484, 485, 493, 677, 678
 - Malagasy, 564, 579, 583, 615, 649
 - merchant, 171, 240, 277, 293, 301, 306, 309, 314–316, 326, 328, 501, 525, 538, 678
 - in Muslim world, 5, 58, 171, 282, 290, 304, 318, 325, 326, 328, 518, 678
 - in peripheries, 652, 655, 658, 662
 - alliances with cores, 662
 - conversion to religion of
 - core regions by, 108, 157, 158, 330, 440, 500, 550, 551, 659, 662
 - in semi-peripheries, 653, 655, 658, 662
 - Southeast Asian, 89, 95, 374, 498, 500, 509
 - Javanese, 100, 260, 277, 48, 501
 - West African, 157, 313, 440, 550, 659
 - embassies, *see* diplomatic relations
 - empires, 10, 147, 620, 631, 633, 639, 643, 660, 661
 - birth of/building of, 4, 639, 660, 661, 664, 666, 667
 - ancient (Bronze Age/Iron Age), 620, 623, 625, 626, 627, 628, 629
 - in Central Asia, 175, 185, 229, 287–289, 297, 515, 666
 - in China, 4, 147, 148, 160–161, 174, 178, 190, 203, 212, 434
 - from city-states, 11, 89, 94, 360, 679
 - Egyptian, 309–310, 316
 - in Europe, 7, 8, 9, 150, 155, 629
 - Indian, 75, 76, 80, 83, 149, 220, 221, 223, 232, 233, 234, 241–242, 456, 481, 483, 664
 - in western Muslim world, 4, 41, 43–44, 149, 231, 281, 285, 290, 449–450, 457, 516–517
 - Portuguese, 603
 - Southeast Asian, 95, 255, 272
 - Spanish, 609
 - West African, 51, 173, 303, 313
 - collapse of, 3, 640–641, 643
 - Chinese, 12, 32–33, 35–36, 160, 202–203
 - Indian, 76, 221, 228, 232, 243–245
 - in western Muslim world, 13, 67–71, 296
 - Southeast Asian, 269
 - encyclopedias
 - Chinese, 464
 - energy
 - captures, 3, 182, 458
 - non-renewable
 - reliance on, 690
 - Enlightenment
 - European, 687
 - Islamic, 6
 - entrepôts; *see* trade hubs
 - environmental changes
 - in Madagascar, 373, 555, 578
 - environmental problems, 332, 449, 641, 685
 - in capitalism, 690
 - of cores, 642
 - innovations induced by, 640
 - epidemics, 642; *see also* plague epidemics
 - in China, 12, 31, 33, 174, 435, 473
 - in Egypt, 69, 174, 300, 315, 446, 522, 525, 530
 - in Europe, 10, 174, 436
 - global, 174
 - in Japan, 28
 - reductions in, 509
 - in Southeast Asia, 174, 273, 509
 - in western Asia, 13, 43, 68, 69, 296, 446, 522
 - ethnicism, 395
 - eunuchs
 - at Chinese courts, 469
 - Eurocentrism, 672
 - of Braudel, 435, 680
 - Europeans; *see also* Portuguese
 - in Central Asia, 167, 289
 - in China, 169, 170, 172, 210, 211, 293
 - in Ethiopia, 325, 602
 - in India, 295, 447, 481, 482, 531, 606
 - in western Asia, 172, 175, 290, 291, 450, 517, 519, 528
 - exams
 - for doctors
 - in China, 30
 - in Muslim world, 30
 - for government officials
 - in China, 4, 18, 19, 22, 31, 32, 147, 178, 202, 213
 - in Japan, 28
 - in Southeast Asia, 271, 511
 - exchange networks
 - Central Asian, 3, 4, 5, 10, 19, 23, 25, 31, 32, 54, 61, 64, 67, 148, 169, 170, 185, 206, 229, 232, 293, 297, 460, 516, 517
 - of China, 4, 5, 23, 24, 26, 27, 28, 32, 39, 63, 90, 91, 148, 156, 169, 180, 182, 184, 185, 189, 190, 192, 195, 197, 198, 199, 200, 202, 205, 206, 209, 214, 215, 248, 250, 261, 263, 265, 266, 272, 273, 275, 277, 278, 279, 434, 435, 459, 460–463, 464, 471, 474, 475, 511, 512
 - Comorian, 137, 140, 367, 368, 449, 552
 - of East Africa, 54, 59, 106, 107, 111, 112, 113, 114, 115, 116, 117, 118, 119, 123, 170, 279, 283, 319, 320, 324, 329, 330–339, 340, 342, 346, 348, 353, 354, 356, 357, 360, 363, 364, 365, 368, 390, 449, 463, 538, 541, 542, 544, 545, 547, 548, 549, 550, 555, 608, 612, 613
 - of Egypt, 14, 52, 70, 153, 157, 162, 165, 173, 283, 300, 301, 302, 303–305, 306, 307, 308, 309, 311, 313, 314, 315, 318, 324, 328, 339, 348, 443, 447, 469, 524, 526, 604

- emergence of, 618
 European, 8, 14, 15, 151, 154, 153, 154, 164, 165, 170, 171, 172, 200, 249, 286, 301, 307, 311, 314, 436, 437, 439–441, 442, 443, 450, 453, 524, 603–605
 of first world-systems, 620–629
 Indian, 11, 13, 59, 70, 77, 79, 80, 81, 82, 84, 85, 86, 104, 122, 123, 149, 157, 173, 199, 205, 216, 217, 218, 221–226, 227, 232, 233, 235, 236, 237, 238, 240, 245, 246, 247, 248, 249, 250, 251, 254, 258, 269, 275, 278, 293, 295, 304–306, 315, 318, 322, 323, 324, 325, 328, 335, 340, 353, 356, 368, 448, 449, 450, 451, 452, 462, 477, 478, 479, 480, 482, 485, 487, 489, 490, 492, 494, 506, 507, 533, 534, 537, 541, 547, 548, 608, 609
 of Indian Ocean, 12, 50, 54, 60, 62, 64, 149, 156, 218, 251, 623, 645
 internationalization of, 239, 247, 306, 671, 678
 of Japan, 27, 28, 185, 200, 207, 214, 434, 459, 470, 508
 of Madagascar, 140, 338, 339, 367, 372, 374, 375, 379, 382, 388, 390, 391, 393, 394, 410, 429, 449, 555, 558, 560, 569, 584, 612, 613, 615, 649
 of Mongol Empire, 164, 205, 289
 in Muslim world, 4, 7, 11, 15, 27, 37, 43, 45, 48, 50, 53, 54, 55–56, 60, 62, 63, 64, 65, 67, 81, 104, 111, 197, 249
 of Ottoman Empire, 450, 516, 517
 of Persian Gulf/Iran, 11, 24, 59, 111, 112, 123, 157, 218, 269, 283, 293, 295, 298, 319, 344, 346, 452, 462, 463, 469, 485, 519
 of Red Sea, 120, 157, 218, 283, 298, 317, 482
 Southeast Asian, 11, 13, 24, 26, 37, 85, 89, 90, 91, 93, 95, 96, 97, 98, 101, 133, 169, 195, 198, 211, 214, 215, 250, 251, 252, 254, 256, 257, 258, 259, 260, 261, 263, 265, 266, 267, 272, 275, 276, 277, 278, 279, 335, 372, 435, 448, 452, 462, 463, 464, 471, 480, 492, 494, 498, 500, 501, 503, 504, 505, 506, 507, 511, 512, 574, 575, 663
 West African, 52, 53, 54, 158, 159, 173, 302, 306, 313, 315, 440, 441, 455
 Yemeni, 14, 162, 218, 237, 240, 248, 249, 250, 302–306, 308, 309, 313, 321–325, 327, 328, 348, 363, 367, 447, 480, 485, 490, 532, 534
 exchanges
 deterioration in terms of, 656, 660
 power relations in, 5, 108, 157, 330–331, 356, 500, 545–546, 550, 551, 636, 638, 650–662; *see also* unequal exchanges
 expeditions
 Central Asian, 216, 244
 Chinese, 19, 23, 176, 207, 269, 271
 to East Africa, 449, 493, 536
 to the Indian Ocean, 295, 434, 444, 460–469, 490, 532, 644
 to Southeast Asia, 207, 269, 271, 272, 496, 505
 Egyptian, 81, 313, 525, 528, 529
 Genoese, 172
 Indian, 221, 227, 243, 244, 483, 484
 from Muslim world, 51, 135, 284, 319, 324
 Omani, 59, 92, 111
 Portuguese, 439, 454, 456, 543, 546, 553, 602, 604, 607
 Southeast Asian, 88, 103, 133, 256, 267, 271, 498, 500, 504
 Spanish, 569
 exploitation
 of Africa, 330–332, 542–547, 610, 652, 653
 in China, 161, 203, 204, 212
 in Egypt, 316, 522
 in India, 488
 of peripheries by cores, 332, 642, 650–663
 explosive devices, 163, 181, 191, 241, 289, 293, 312, 641
 exports, 667
 African (sub-Saharan), 51, 52, 68, 120, 158, 159, 302, 313, 440, 441, 450, 522
 in Bronze Age, 618, 622, 624, 679
 Central Asian, 5, 18, 25, 31, 46, 67, 68, 77, 122, 232, 235, 303, 310, 664
 Chinese, 5, 21, 26, 27, 40, 58, 102, 161, 174, 181, 184, 185, 187, 192, 200, 201, 202, 204, 208, 239, 243, 257, 261, 297, 317, 336, 363, 459, 460, 468, 471, 473, 507, 565, 635, 636, 641
 Comorian, 126, 130, 368
 of cores, 330, 636, 651–654, 656, 658
 East African, 51, 68, 113, 114, 115, 116, 117, 120, 159, 197, 208, 235, 284, 302, 317, 320, 332, 333, 334, 335, 338, 339, 353, 354, 359, 360, 363, 364, 447, 542, 543, 544, 545, 546, 552, 607, 612, 656
 Egyptian, 300, 302, 312, 318, 328, 340, 363, 364, 443, 522, 525, 526, 533, 590, 669
 European, 8, 10, 51, 58, 68, 235, 297, 301, 311, 314, 316, 443, 451, 517, 522, 550, 603
 Italian, 165, 443, 517, 522, 523, 524

- exports (*cont.*)
- Indian, 58, 68, 73, 80, 102, 114, 208, 218, 224, 233, 242, 245, 248, 264, 295, 311, 318, 325, 334, 340, 354, 364, 369, 444, 452, 477, 487, 488, 490, 494, 506, 520, 529, 540, 541, 549
 - of Bengal, 235, 447, 448, 477, 492, 493
 - of Gujarat, 198, 217, 218, 246, 278, 335, 340, 354, 447, 477, 479, 480, 506, 520, 537, 541, 566, 605, 669
 - Japanese, 28, 185, 195, 206, 207, 452, 470
 - Malagasy, 125, 139, 140, 141, 142, 320, 339, 364, 374, 377, 382, 449, 538, 552, 555, 559, 560, 568, 579, 601, 648
 - of Muslim world, 26, 27, 28, 42, 48, 49, 62, 81, 82, 86, 92, 96, 104, 110, 112, 113, 114, 116, 117, 118, 130, 132, 139, 197, 249, 293, 319, 324, 325, 340, 354
 - Yemeni, 65, 249, 302, 309, 323, 353, 363, 367, 375, 378, 387, 480, 506, 531, 537
 - of peripheries, 331, 654–655, 661, 662
 - Persian Gulf/Iranian, 21, 27, 46, 87, 90, 110, 114, 118, 119, 122, 130, 139, 140, 141, 142, 208, 235, 236, 248, 249, 284, 293, 295, 319, 342, 345, 348, 353, 367, 371, 375, 377, 386, 389, 394, 519, 537, 559
 - of Hormuz, 295, 520
 - Southeast Asian, 89, 91, 102, 206, 208, 228, 250, 261, 266, 267, 273, 363, 444, 452, 486, 497, 498, 500, 506, 510, 511, 512, 513
 - Javanese, 97, 260, 261, 264, 276, 278, 279, 497, 501, 503
 - Sriwijaya, 90, 91
 - Sri Lankan, 62, 87, 114, 208, 240, 241, 365
 - Fakhr ad-Din group, 352
 - Fakhr ad-Din mosque (Mogadishu), 344, 352
 - famines
 - in China, 36, 160, 212, 435, 472, 473
 - in Egypt, 70, 300, 451, 456, 522, 530
 - in Europe, 173
 - in India, 176, 240, 243, 244, 449
 - in Iran, 43, 280, 296
 - in Muslim Empire, 13, 68, 69
 - in Southeast Asia, 273, 473
 - Farolfi & Co. (firm), 171
 - fasting months
 - in Madagascar, 425
 - Fatawa-yi Jahandari*, 242
 - Fatimids, 121
 - rule by, 13, 17, 69, 81, 299–307
 - trade by, 51, 53, 54, 70, 149, 153, 299–306
 - federalism, 684
 - feudalism, 7, 683
 - and capitalism, 152, 166, 681
 - in Europe, 7, 150, 153, 166, 170, 438, 683
 - Russia, 451
 - in India, 73, 77, 231, 484, 485
 - in Japan, 28, 199, 470, 683
 - figus trees
 - Malagasy ritual significance of, 415, 578, 579
 - finances, state; *see also* customs duties; taxes
 - in China, 19, 473
 - in Egypt, 315, 316, 321, 530
 - in Europe, 154, 437, 442, 682
 - in India, 217, 483
 - in Iran, 290, 292
 - in Muslim Empire, 58
 - in Southeast Asia, 508
 - in Yemen, 321, 533
 - financial crises
 - in China, 161, 204, 212, 213, 435, 473
 - in Egypt, 523, 528, 530
 - in Europe, 173, 177
 - in India, 173, 243
 - in Iran, 291
 - in Muslim Empire, 68, 69
 - financial expansion, 171, 172, 439, 442, 627, 641
 - in China, 188, 193, 194, 204
 - in India, 242, 247
 - financial phases
 - in capitalist development, 173, 640, 641, 690
 - finger millet, 112, 396, 400
 - firearms, *see* guns
 - fire-lances, use of, 163, 203
 - firms, *see* private enterprises/firms
 - fishermen, 237
 - status of, 75, 358, 597
 - fishing, 550, 588
 - in East Africa, 341
 - flamethrowers, 181, 203, 318, 467
 - fleets
 - Arab, 43, 135, 181
 - Omani, 60
 - Yemeni, 321, 322, 533
 - Byzantine, 14, 43, 181
 - Chinese, 19, 26, 190, 195, 202, 203, 206, 207, 213, 279, 295, 434, 447, 456, 458, 460–467, 492, 496, 510, 520, 523, 536, 552, 604, 660
 - Dutch, 675
 - Egyptian, 300, 308, 322, 530, 607
 - Indian, 84, 227, 245, 246, 248, 490, 506, 605, 606
 - Ottoman, 449
 - Portuguese, 453, 454, 530, 575, 584, 602, 603, 604, 607, 611, 613
 - Southeast Asian, 88, 103, 132, 256, 274, 276, 505
 - Spanish, 666
 - floodings, 47
 - Nile
 - high, 4, 69, 147, 300, 310, 341
 - low, 12, 70, 149, 157, 160, 173, 299, 449, 525, 646
 - Tigris, 43
 - Yellow River, 19, 212
 - footprints
 - symbolism of/legends on, 394
 - foragers, 114, 332; *see also* hunter-gatherers
 - forts/fortifications
 - in African interior, 337
 - in Arabia, 347
 - in Yemen, 531
 - Chinese, 23, 213, 460, 468
 - in East Africa, 354
 - in India, 93, 241, 244, 484
 - in Iran, 289

- in Madagascar, 374, 556, 557, 570, 578–582, 648
 - in Persian Gulf, 293
 - Portuguese, 440, 604, 605
 - in Southeast Asia, 96, 103, 502, 511
- foundation myth
 - of Kilwa, 344
 - of Antemoro kingdom, 521
- Frances* (ship)
 - accounts from, 560, 562–563
- free trade, promotion, 154, 668
- freedom
 - individual, 152, 202, 444, 627, 637, 687, 688, 689
 - sexual, 519, 558
- freedom of enterprise/trade, 21, 34, 50, 156, 290, 441–442, 452, 500, 517, 637, 688
- freedom of thought, 66, 150, 625
 - in Europe, 445, 637, 688
- fringe cultures
 - in East Africa, 110
 - in Madagascar, 395, 645–650
- Fujiwara clan, 28
- funerary customs
 - in Comoros, 125
 - in East Africa, 588
 - in India, 231
 - in Madagascar, 377, 419, 564–568, 587–588
- funerary stones/architecture
 - in China, 199, 210, 267
 - in Comoros, 553
 - in Madagascar, 557, 558, 564
- furnaces, 163, 368, 436, 640; *see also kilns*
 - in China, 191
- fuzhou* ships, 40, 186, 206
- Gahādavala dynasty, 216
- Gajapati dynasty, 456, 478, 485, 486
- The Galigo*, 136, 500, 575
- Ganga dynasty, 233
- garlic
 - in Madagascar, 397
 - taboo on, 416
- genetic data
 - on Malagasy population, 371, 598
 - African origins, 391–392, 598
 - on rice variations
 - in Madagascar, 401
- geographers/geography, Arab scholars
 - on Comoros, 553–554
 - on East Africa, 68, 70, 106, 110, 111, 112, 113, 114, 115, 117, 119, 124, 132–133, 134, 135, 137, 140, 332, 333, 342, 346, 349, 351, 353, 354, 355, 356, 367, 368, 383, 544, 591, 597
 - on Madagascar, 133, 134, 136, 140, 378, 379, 380, 381, 382, 410, 569–573
- Geography* (Ptolemy), 445
- geomancy
 - Malagasy practices of, 404, 590, 593
- Ghaznavid dynasty, 44, 67, 176, 216, 235, 356
 - looting by, 229, 230
- Ghurids, 176, 216, 229, 230, 231, 282
- ginger, 298, 302, 305, 491, 526, 527, 554, 610
- giraffes, 196, 233, 461, 493, 520, 531, 552
- glass
 - presence of
 - in Arabia, 320, 322, 323
 - in China, 26, 184, 197
 - in Comoros, 130, 367
 - in East Africa, 49, 111, 114, 116, 118, 121, 133, 334, 335, 354, 360, 363, 364, 540, 547
 - in India, 302, 533
 - in Japan, 28
 - in Madagascar, 142, 374, 375, 376, 388, 389, 553, 566
 - in Southeast Asia, 90, 92, 93, 96, 104, 228, 258, 259, 261, 265, 266, 498
 - in Sri Lanka, 87
 - production of
 - in China, 5, 19, 29
 - in Egypt, 49, 87, 92, 121, 259, 300, 301, 302, 322, 363, 389, 533
 - in India, 49, 90, 198, 334, 335, 375, 498, 540
 - in Italy, 164, 523
- in Muslim world, 6, 26, 28, 49, 59, 62, 90, 92, 93, 96, 104, 111, 114, 130, 197, 228, 259, 261, 266, 281, 360, 498
- in Persian Gulf/Iran, 111, 116, 119, 130, 259, 320, 376
- in Southeast Asia, 264, 265
- in Sri Lanka, 90
- globalization, 3, 147–159, 161–173, 433–455, 617, 637, 638, 681
- globes, European, 384, 446
- gold, 330
 - coins
 - in Egypt, 51, 53, 173, 248, 302, 313, 314, 348, 491, 530
 - in East Africa, 342, 347, 361, 363, 467
 - in Europe, 8, 170, 173, 314, 443, 491
 - Byzantine, 44, 313
 - in India, 81, 84, 102, 223, 224, 228, 229, 231, 235, 238, 245, 249, 489
 - in Muslim Empire, 16, 44, 51, 68
 - in Southeast Asia, 92, 102, 259, 260, 264, 265, 268, 497, 599
 - in Yemen, 121
 - exchange rates for, 159, 174, 200, 224, 237, 439, 474, 494, 669
 - exploitation of/presence of
 - in America, 682, 683, 684
 - in Arabia, 51
 - in Central Asia, 51, 122
 - in China, 237, 269, 458
 - in East Africa, 51, 53, 111, 114, 115, 117, 132, 135, 157, 173, 246, 302, 332, 334, 335, 336, 337, 339, 340, 354, 359, 360, 379, 457, 540, 542, 543, 544, 545, 546, 607, 673
 - in Ethiopia, 53, 162, 302
 - in Europe, 51, 155, 165, 312, 314
 - in India, 72, 79, 229, 230, 232, 233, 238, 241
 - in Japan, 28, 200, 459, 470

- gold (*cont.*)
- in Madagascar, 374, 555, 559, 561, 612
 - in Nubia, 53
 - in Southeast Asia, 61, 90, 92, 101, 136, 246, 262, 265, 267, 268, 271, 500, 503, 511, 513
 - in Sri Lanka, 497
 - in West Africa, 51, 52, 53, 158, 165, 172, 173, 302, 313, 314, 439, 440, 441, 545, 673
- export prohibitions on
- in China, 29, 204
- imports
- of China, 200, 207, 262, 273, 459, 461, 463, 511
 - of Comoros, 368
 - by Europeans, 170, 172, 439, 440, 455, 454, 450, 604, 607, 682, 684, 685
 - of Egypt, 120, 165, 302, 312, 314, 441, 443, 480, 524
 - of India, 94, 122, 226, 235, 242, 246, 248, 250, 305, 328, 338, 447, 479, 480, 486, 491, 494, 513, 530, 533, 537, 547
 - of Madagascar, 368
 - of Ottoman Empire, 517
 - of Persian Gulf/Iran, 249
 - of Southeast Asia, 132, 267, 273, 279, 498, 500, 506
 - of Yemen, 328, 480, 533
- monetary use of; *see* coins
- in Africa, 159, 540, 546
 - in China, 237
 - in Madagascar, 599
 - in Ottoman Empire, 517
 - in Southeast Asia, 255, 256, 264, 513
- objects/ornaments, 25, 27, 45, 48, 90, 98, 228, 235, 243, 261, 264, 265, 289, 291, 300, 326, 410, 532, 548, 549
- in Africa, 173, 335, 360, 361, 549
 - in Madagascar, 142, 566, 567
- shortages, 201, 303, 440, 530
- status
- in East Africa, 117, 335, 542, 544
- symbolism, 421, 422, 453, 543, 567
- trade in
- Central Asian, 51, 68, 122
 - East African, 14, 38, 51, 53, 68, 106, 111, 115, 120, 121, 122, 132, 135, 157, 159, 173, 302, 331, 335, 337, 338, 340, 342, 352, 359, 360, 364, 365, 368, 379, 447, 454, 479, 539, 540, 541, 544, 545, 546, 547, 548, 608, 652, 654, 658, 664, 666
 - European, 51, 68
 - Indian, 51, 82, 221, 222, 225, 235, 485
 - by Muslim Empire, 58, 94, 109
 - in Persian Gulf, 292
 - by Portuguese, 330, 440, 604, 607
 - Southeast Asian, 38, 91, 98, 104, 277, 501, 510, 513
 - West African, 16, 51, 52, 53, 54, 68, 158, 159, 165, 170, 173, 302, 313, 314, 439, 440, 441, 450, 545, 600, 662
- as value measurement, 56, 208, 256, 267, 442, 538
- goldsmiths, 46
- Malagasy, 600, 615
- government administration/
- structures, 640, 641, 669, 676; *see also* bureaucracies; *iqṭāʿ*
- of Byzantine Empire, 9–10, 14, 20, 154
- in Central Asia, 160, 229, 643
- of China, 166, 437, 463, 473, 628, 637, 685, 686
- Ming period, 213, 434, 435, 452, 458, 459, 463, 469, 472, 473, 474, 644
- Mongol period, 160, 161, 204, 205, 209, 212, 289
- Song period, 147, 148, 156, 161, 178, 179, 180, 185, 188, 192, 193, 195, 201, 202
- Tang period, 4, 19, 20, 21, 31, 32, 34
- of East African city-states, 349–351, 358, 360, 539, 550
- of Egypt, 70, 281, 299, 300, 309, 310, 311, 312, 525, 526, 528, 529, 675
- of Europe, 7, 151–154, 166, 437, 445, 629, 640, 686, 688
- city-states, 32, 154, 155, 171, 436, 437, 441, 445, 675, 679
- of India
- in Bahmani sultanate, 480, 482
 - in Chola Empire, 223, 224, 225, 226, 239–240, 676
 - in Delhi sultanate, 169, 231, 242, 243, 244
 - in Pandya kingdom, 240
 - in Vijayanāgara, 484, 487
- of Iran, 67, 69, 282, 290–291, 292, 294, 515
- of Muslim Empire, 44, 45, 50, 55, 57
- of Ottoman Empire, 450, 516, 517
- of Seljuk Empire, 70, 231, 281
- of Southeast Asia, 95, 97, 255
- Ayuthiā, 510
 - Dai Viet, 271, 510, 511
 - Java, 98, 100, 276
 - Malacca, 506
- of Yemen, 318, 320–324, 326, 327
- government bonds, European, 437
- graphite use in pottery
- in Comoros, 127–129, 320
 - in East Africa, 110, 131, 320, 364, 538
 - in Madagascar, 140–141, 376, 378, 385, 386, 387, 388, 389, 390, 578, 580, 581, 582, 583
- Great Mosque (Kilwa), 361, 366, 535
- Great Tang Records on the Western Regions*, 29
- Great Wall (China), 459, 468
- “Greek fire,” 43, 181
- Guang Yutu*, 164, 196
- guilders, 165
- guilds
- of craftsmen, 49, 80
 - of weavers, 234, 487
- European, 49, 153, 166, 444, 528, 637

- Indian, 11, 77, 80, 82, 84, 222, 240, 487; *see also* guilds of merchants
 power of, 84, 226
 religious tolerance of, 226
 spread of, 85, 224, 240
 of merchants
 in Assyria, 622
 arming of, 84, 86, 225, 226, 680
 banking activities of, 669
 in China, 475
 Indian, 16, 83, 85, 86, 104, 149, 218, 224, 225–226, 227, 228, 234, 240, 245, 257, 258, 487, 488, 637, 669, 670, 680
 in Mongol Empire, 164, 677
 in Southeast Asia, 103, 258
 in Muslim world, 49, 305, 306, 517, 520
 religious tolerance of, 305
 guinea fowl
 in Madagascar, 126, 138
 gunpowder
 knowledge of, 163, 294
 spread of, 181, 309, 634, 662
 recipes
 Arab, 181, 294
 use of
 in China, 4, 22, 148, 181, 191
 in Europe, 163
 in India, 181, 241, 481
 in Muslim world, 163, 168, 181, 450
 guns
 emergence of, 191, 203
 production of, 438, 455, 467, 492, 507, 510
 use of
 in Ayuthiā, 510
 in China, 203, 214, 467
 by Europeans, 440, 455, 516
 in India, 485, 492
 in Korea, 214
 in Malacca, 507
 in Ottoman Empire, 449, 516
 Gurjara-Pratihāra dynasty, 6, 10, 13, 16, 72, 75–79, 98, 216
 Habashī slaves/*habshi*, 68, 356, 364, 365, 481, 493
 on ships, 364, 365
 hadiths, 46, 50
 Hadramis, 322, 533, 546
 merchants, 521
 migrations of
 to Comoros, 124
 to East Africa, 521
 to India, 237, 324, 480
 Han dynasty, 5, 37, 634, 635
 Ḥanafī school of Islamic law, 55, 57, 231
 Hanbali school of Islamic law, 13, 54, 68
 hansas/Hanseatic League, 165, 171, 172, 679
haram sites, 42, 597, 598
Hāwiya, 553, 569, 570, 571–572
hawṭab (sacred enclaves), 370, 597, 598
 hegemonies, 10, 446, 627, 628, 640, 641, 690
 hemp, 255, 283
 in China, 156, 179, 186, 190, 191, 192, 207, 475
 in East Africa, 123
 in India, 217
 in Madagascar, 143
 henna, 397
 hierarchies; *see also* aristocracies; elites
 development of, 618, 624, 636, 671
 in societies, 109, 543, 655, 675
 of African interior, 115, 334, 336, 337, 544, 545
 in China, 156, 179, 180, 205, 452, 472, 473
 in Comoros, 366, 409
 in East Africa, 107, 108, 118, 329, 330, 342, 349, 350, 351, 356, 358, 361, 409, 538, 539, 543, 550, 551, 649
 in Europe, 153, 155, 171, 441
 in India, 74, 77, 82, 85, 100, 218, 223, 234, 237, 238, 484, 485, 489
 in Madagascar, 372, 390, 404, 409, 417, 420, 427, 429, 556, 590, 649
 in Muslim world, 6, 58, 282, 326, 523, 526
 in Southeast Asia, 95, 100, 254, 268, 273, 448, 500, 501, 509
 in West Africa, 157, 440, 454
 in world-systems, 331, 617, 650–653, 657, 658, 659, 660, 662, 663, 668, 671, 676, 680, 689
 shifts in, 643, 664–665, 671
Hikayat Banjar, 405, 408
Hikayat Hang Tuah, 505
Hikayat Raja-raja Pasa, 270
 Hinduism
 in China, 250
 in India, 11, 73, 74, 75, 85, 86, 100, 150, 173, 192, 236, 237, 238, 242, 244, 248, 325, 365, 447, 477, 478, 483, 484, 485
 revival of, 483
 sects in, 237
 in Southeast Asia, 11, 93, 97, 100, 136, 240, 258, 259, 271, 505, 659
 Hindus
 in China, 210, 250
 merchants, 82
 in East Africa, 123, 246
 in India, 232, 236, 238, 239, 246, 247, 304, 306, 315, 447, 479, 485, 486, 489, 490, 507
 in Persian Gulf, 219, 519
 in Southeast Asia, 85, 86, 92, 103, 104, 225, 240, 245, 257, 507
 in Yemen, 324, 328
A History of Deeds Done Beyond the Sea, 307
History of Pate, 539
History of the Kings of Imerina, 406, 427, 428
History of the Prophets and Kings, 66
History of the Yuan, 270
 Hojo clan, 200
 Holy Sepulchre Church (Jerusalem), 285
 horses, 7, 8, 162, 394, 620, 663, 667
 breeding of/export of
 in Arabia, 224, 235, 292, 324, 325
 in Yemen, 237, 240, 249, 309, 321, 323, 325, 328, 480, 485
 in Central Asia, 235, 249, 460, 468, 474, 628, 664

- horses (*cont.*)
 in China, 23, 31, 32, 235, 460
 in Persian Gulf/Iran/Iraq,
 235, 236, 240, 248, 249,
 280, 292, 293, 295, 481,
 485, 520, 604
 carts drawn by, 624
 prices of, 32, 186, 235, 249, 293,
 441, 468, 485
 trade in, 62
 in China, 5, 18, 25, 31, 32, 156,
 185, 186, 195, 249, 460,
 463, 468, 474, 493, 628
 Indian, 77, 80, 217, 218, 221,
 224, 225, 233, 235, 236,
 237, 238, 239, 240, 242,
 245, 247, 248, 249, 280,
 292, 293, 295, 323, 324,
 325, 477, 480, 481, 482,
 483, 485, 490, 492, 520,
 603, 604, 606
 in Muslim world, 58, 314
 in West Africa, 158, 330, 441
 use of
 in China, 21, 32, 628
 in Europe, 150, 162
 in India, 72, 83, 218, 231, 235,
 240, 241, 242, 245, 483
 in Mongol Empire/Central
 Asia, 162, 230, 288, 289
 in Muslim world, 46
 in Ottoman Empire, 517
Houhanshu, III, 215
 House of Egibi, 626
 House of the Mosque (Kilwa), 537
 houses
 East African, 339, 341, 342,
 357, 358
 Malagasy, 125, 409, 557
 of chiefs/rulers, 406, 416, 421
 new
 rituals upon entering of, 424
 Hoysala dynasty, 217, 221, 224,
 228, 232, 238
Huan yushi, 197
Ḥudūd al-ʿālam, III
hui people, 29
 humanism, European, 166, 445
 Hundred Years' War, 177, 457
 Huns, 77, 642
 Husuni Kubwa palace (Kilwa),
 361–362, 363, 366
 hydraulic power
 in China, 5, 22, 30, 181, 182, 191
 in Europe, 163, 436
 in Muslim world, 286
 Ibadis/Ibadism, 59, 350
 in East Africa, 54, 109, 112, 119,
 119, 346, 347, 348, 350,
 352, 538
 long-distance trade by, 27, 54
 in West Africa, 50, 52, 53, 54,
 158, 306, 313
 iconoclast movement/crisis, 7, 9
 ideologies; *see also* religions
 in Europe, 7, 433, 453, 454, 455,
 640, 665, 682, 683, 686,
 687, 688
 significance of, 41, 100, 109,
 160, 213, 281, 332, 338,
 551, 619, 629, 636, 637,
 638, 651, 652, 653, 654,
 656, 657, 658, 659, 660,
 662, 663, 665, 671, 678,
 680, 685, 686, 690
 Ilkhānid dynasty, 162, 170, 243,
 280, 290–297, 312, 441
Imago Mundi, 433, 453
 immunization against diseases
 in China, 189
 imperialism, 639
 Chinese, 23
 European, 455, 461, 660, 679,
 682, 684, 688
 imports
 African interior, 52, 158, 159
 to Central Asia, 5, 25, 29, 31, 48,
 185, 186, 208, 297
 to China, 21, 25, 26, 27, 90, 102,
 148, 182, 186, 187, 188,
 190, 192, 195, 197, 198,
 204, 206, 208, 452, 463,
 471, 474
 to Comoros, 123, 125, 129, 130,
 367, 368, 449, 553
 to East Africa, 110, 112, 113, 114,
 115, 116, 118, 119, 122, 132,
 139, 284, 329, 334, 336,
 337, 338, 340, 342, 344,
 345, 348, 353, 354, 355,
 360, 363, 364, 367, 375,
 376, 382, 449, 536, 537,
 538, 540, 541, 542, 543,
 544, 547, 549
 to Egypt, 120, 301, 302, 303,
 303, 306, 311, 312, 313,
 314, 317, 522, 529, 530
 to Europe, 165, 316, 443, 444,
 529, 604, 607
 to India, 77, 80, 122, 232, 233,
 235, 236, 238, 242, 243,
 245, 247, 249, 250, 325,
 354, 365, 477, 486, 490,
 492, 511
 to Bengal, 452
 to Gujarat, 77, 217, 444,
 480, 546
 to Vijayanāgara, 485, 486
 to Japan, 5, 22, 28, 30, 62, 184,
 185, 200, 201, 460,
 470, 512
 to Madagascar, 123, 139, 140,
 141, 142, 338, 355, 367,
 371, 375, 376, 377, 378,
 386, 387, 389, 390, 394,
 449, 559, 565, 566, 567,
 579, 584
 to Muslim world, 48, 51, 68, 113,
 114, 294, 296, 325
 to Hormuz, 295, 519, 520
 to Yemen, 302, 317, 318, 319,
 320, 323, 328, 533, 546
 to Ottoman Empire, 517
 to Southeast Asia, 90, 93, 96,
 104, 255, 256, 268, 444,
 492, 498, 505, 506,
 507, 513
 to Java, 100, 102, 261, 264,
 279, 513
 to Srīwijaya, 90, 97
 impurity
 in East Africa, 358
 in India, 75, 488
 in Madagascar, 404, 594
 'inān partnership agreements, 55
 incendiaries, use of, 4, 22, 181,
 191, 294
 incense, 27, 38, 42, 90, 91, 103, 120,
 182, 184, 188, 196, 197,
 208, 217, 228, 266, 315,
 318, 322, 323, 324, 467,
 500, 564, 567, 597, 663
Incoherence of the Philosophers, 150
 Indian world-system, 626
 indianization
 of Islam, 82, 231, 237, 247,
 447, 489
 of Southeast Asia, 73, 259, 270,
 278, 630, 644
 Indians, 82, 219, 479, 575
 in China, 184, 199, 250

- in East Africa, 121–123, 335, 354, 358
 - merchants, 353, 354, 355, 537, 548–549, 608
 - in Madagascar, 408, 409, 555
 - in Persian Gulf region, 355, 519
 - in Southeast Asia, 103, 104, 250, 278, 506, 508
 - in Yemen/Red Sea, 309, 324, 525, 533, 630
 - indigo
 - cultivation of, 47, 218
 - in India, 477, 480
 - trade in, 90, 198, 217, 218, 235, 245, 295, 443, 450, 480, 488, 537, 579
 - individualism
 - emergence of, 22, 188, 202, 502, 625, 627, 670
 - in Europe, 152, 167, 444–445, 625, 627, 637, 687–689
 - Indo-Muslim synthesis
 - in India, 477
 - in Madagascar, 372, 404, 505
 - in Malacca, 505
 - Industrial Revolution, 640, 661, 665, 682, 683, 687
 - absence in Asia of, 686, 689
 - inflation, 21
 - in China, 161, 204, 212, 458
 - in Europe, 450, 451
 - ingots
 - African, 337, 360, 540
 - in China, 169
 - Southeast Asian, 90, 98, 260, 261
 - inheritance rules
 - in China, 191, 202, 213
 - in Comoros, 124
 - Malagasy, 419, 595
 - in Muslim world, 282
 - innovations, *see* institutional innovations; technical innovations
 - Inquisition, 151
 - inscriptions
 - Arabic
 - in East Africa, 109, 346, 353
 - in India, 248
 - in Madagascar, 567, 576–577, 592–594, 600
 - in Southeast Asia, 259, 267, 269, 498
 - Chinese, 462
 - Indian/Sanskrit, 45, 77, 78, 79, 82, 218, 219, 222, 226, 233, 235, 488
 - on guilds, 77, 80, 85, 226
 - Mongol, 289
 - Southeast Asian, 73, 88, 89, 95, 104, 252, 256, 262, 267, 270, 274, 420, 498
 - Javanese, 37, 97, 98, 99, 100, 101, 102, 103, 104, 211, 258, 260, 261, 263, 264, 276, 513
 - in Sri Lanka, 255, 258
 - Tamil, 223, 224, 225, 227, 236, 488
 - in China, 199, 210, 224, 250
 - on guilds, 225, 257, 487, 488
 - in Southeast Asia, 86, 224, 228, 254, 257, 258
 - institutional innovations, 625, 634–638, 651, 663, 665, 668, 686
 - in China, 626, 627, 689
 - Han period, 629
 - Ming period, 213
 - Song period, 147, 148, 178, 179, 180, 188, 201, 213
 - Tang period, 4, 19, 32
 - in Egypt, 523
 - in Europe, 151–153, 166, 171, 437, 442, 445, 625–627, 674, 675, 682–689
 - Byzantine Empire, 9–10
 - city-states, 437, 455, 637, 640, 674, 679, 682, 684
 - of India, 225, 627, 637
 - in Delhi sultanate, 242
 - of Japan, 28, 689
 - of Mesopotamia, 618, 620
 - of Mongol Empire, 160
 - in Muslim Empire, 46, 55
 - of Ottoman Empire, 516–517
 - of Persia, 626
 - of Roman world, 629, 684
 - of Seljuk Empire, 281
 - of western Asia, 625
- integration
- of Asia, 626, 630
 - of China, 21, 40, 51, 624
 - of East Africa, 11, 107, 157, 552
 - of Europe, 150, 681
 - in India, 74, 76, 626
 - of Mesopotamia, 619
 - in Muslim world, 281, 323
 - of the Roman Empire, 629
 - in Southeast Asia, 255
 - in West Africa, 158
 - in world-systems, 4, 10, 147, 159, 175, 617, 633, 637, 639, 643, 644, 660, 665, 673, 678, 690
- interdependence, 217, 251, 658, 661
- interest (on loans/debts)
- in China, 30, 34, 179, 180, 192
 - in Europe, 152, 437, 453, 674, 685
 - in India, 72, 222
 - in Mesopotamia, 622
 - in Muslim world, 56, 57, 530
 - in Southeast Asia, 513
- internationalization
- of exchange networks, 239, 247
- inventions, *see* innovations
- Investiture Controversy, 152
- iqṭāʿ* system, 69, 70, 231, 241, 242, 244, 275, 281, 282, 294, 309, 310, 312, 315, 515, 522
- Iranians/Persians
- in Arabia, 59, 284, 291, 319, 320, 322, 347, 533
 - in China, 5, 23, 24, 27, 31, 36, 37, 38, 63, 104, 168, 198, 205, 208, 210, 347, 533
 - in East Africa, 109, 118, 346–347, 348, 353
 - in Egypt, 301, 525
 - in India, 50, 60, 63, 81, 82, 83, 231, 236, 237, 243, 246, 292–293, 355, 447, 481, 486, 494
 - in Southeast Asia, 90, 103, 295, 494
- iron
- magnetization of
 - Chinese knowledge of, 186
 - metallurgy/production of, 334
 - in Central Asia, 49, 58
 - in China, 156, 181, 191, 458, 626, 635, 684
 - in Comoros, 125, 130, 368
 - in East Africa, 111, 115, 117, 125, 329, 333, 334, 360, 540, 544
 - in Europe, 49, 58, 163, 436, 634
 - in India, 49, 87, 117, 354

- iron (*cont.*)
- in Madagascar, 125, 139, 140, 142, 374, 378, 386, 387, 388, 389, 391, 394, 411, 566, 581
 - in Southeast Asia, 276, 628
 - spread of, 163, 203, 294, 634
 - in Sri Lanka, 62, 87
 - in West Africa, 52, 337
 - in western Asia, 48
 - monetary use of
 - in China, 34, 186, 194, 195, 201, 204
 - in Madagascar, 600
 - trade in
 - by China, 25, 27, 29, 33, 184, 188, 203, 261, 267, 471, 498
 - by Comoros, 368
 - by East Africa, 111, 117, 132, 137, 333, 354, 368–369
 - by Europe, 58, 68, 300, 364
 - by India, 68, 218, 220, 302, 305, 485, 488, 520
 - by Japan, 470
 - by Madagascar, 613
 - in West Africa, 337
 - irrigation systems
 - in China, 179, 212
 - in Egypt, 48, 300, 310, 312, 316, 446, 623
 - in Europe, 8, 150
 - in India, 73, 76, 79, 221, 232, 244, 484, 486
 - in Iran, 47, 282, 290
 - in Mesopotamia, 43, 291, 446, 622
 - in Muslim Empire, 6, 47, 48, 51, 68
 - in Southeast Asia, 100, 255, 270, 275, 276, 509
 - Isilakolona myth, 399
 - Islam; *see also* caliphates; Shiites; Sufis; Sunnis
 - in Central Asia, 44, 164, 205, 216, 229, 280, 289, 297
 - in China, 12, 29, 35, 36, 59, 62, 63, 156, 161, 168, 169, 170, 183–184, 195, 198–199, 205, 209, 210, 212, 214, 289, 306, 434, 460, 463, 469, 471, 676
 - and Christianity, 7, 8, 284, 285, 307, 441, 451, 453, 455, 603, 607, 608
 - in Comoros, 124, 126, 137, 366, 368, 370, 409
 - conservatism in, 54, 68, 150, 167, 168, 296
 - in East Africa, 11, 105, 106, 108, 109, 111, 113, 119, 157, 170, 329, 331, 340, 342, 344, 347–352, 356, 359, 409, 449, 534, 535, 536, 538, 541, 543, 548, 550, 551
 - emergence of, 6, 42–44
 - in Ethiopia, 162
 - in Europe, 7, 10, 43, 44, 45, 151, 158, 200, 289, 451, 516–518
 - golden age, 6, 45, 59
 - in India, 60, 80–82, 84, 85, 157, 170, 217, 229–249, 291, 295, 324, 446, 447, 477–490, 493, 519, 608, 677
 - indianization of, 231, 237, 247
 - in Madagascar, 140, 371, 372, 374, 377, 382, 404, 406, 407, 408, 409, 550, 551, 555, 558, 559, 561, 563, 567, 568, 569, 571, 572, 576, 577, 582, 589–598, 611, 612, 614, 615
 - in Maldives, 54, 60
 - messianic beliefs, 297
 - in Pakistan, 6, 60, 119, 246
 - in Southeast Asia, 92, 97, 169, 170, 183, 250, 251, 259, 267–269, 275, 277, 278, 279, 446, 448, 496, 497, 498, 500, 501, 502, 504, 505, 506, 508, 510, 511, 514, 609
 - spread of/conversions to, 6, 7, 8, 10, 11, 45, 50, 52–53, 108, 109, 124, 126, 150, 157, 158, 168, 169, 170, 237, 246, 251, 267–269, 303, 321, 329, 351, 446, 477, 493, 500
 - and expansion of trade, 50, 54, 59–60, 62, 65, 73, 157, 199, 246, 247, 310, 344, 351, 352, 366, 449, 498, 507, 514, 536
 - in Sri Lanka, 60, 240, 248
 - in West Africa, 52–53, 158, 303, 313, 440, 551
 - Islamic law
 - usury prohibition in, 56
 - Ismailis, 69
 - in East Africa, 537
 - in India/Indian, 80, 81, 365
 - ivory
 - carving of, 116, 117, 246, 301, 334, 337
 - harvesting of, 116, 117, 118, 157, 158, 162, 333, 540, 542, 545, 552
 - presence of
 - in Arabia, 196, 302, 323, 363
 - in Byzantine Empire, 333
 - in Egypt, 120, 301
 - in Madagascar, 384, 569
 - price of, 538, 541, 551
 - trade in, 14, 52, 111, 118, 120, 122, 132, 162, 196, 330–332, 333, 334, 337, 339, 340, 359, 360, 363, 364, 365, 538, 541, 542, 543, 545, 546, 547, 548, 549, 551, 608, 654–652
 - in China, 26, 38, 62, 91, 112, 182, 188, 196, 208, 279
 - in India, 122, 217, 224, 228, 243, 246, 537
 - in Muslim world, 111, 114, 266, 295, 302, 323
 - by Portuguese, 454, 541, 604
 - by Southeast Asia, 92, 265, 279
 - jade, 25, 326
 - Jains/Jainism
 - in India, 75, 627
 - merchants, 217, 238, 239, 247, 447, 479, 486
 - political power of, 80, 217, 238
 - Jalāyerid dynasty, 177, 294, 297, 515
 - Janissaries, 516
 - Javanese language, 38, 98, 99, 102, 104, 211, 262, 263, 405, 406, 409, 411, 422, 424, 425, 426, 498, 577
 - Javanese people, 37, 97–104, 132, 258, 260–261, 265, 269, 272–272, 273, 274, 276–279, 415, 416, 417, 420, 421, 423, 429, 464, 471, 496, 501–504, 511, 574, 575, 600, 676, 678

- in Malacca, 448, 506, 507
 Jews
 bankers, 56, 301, 305, 437, 675, 676
 in China, 36, 63, 64
 diasporas of, 8, 282, 678
 leadership of, 282
 in Egypt, 300, 301
 expulsion of
 from England and France, 454
 from Iberian peninsula, 454
 in Europe, 176
 in Iran, 290
 in India, 83
 in Khazaria, 9, 44, 54
 in Malacca, 508
 in Muslim Empire, 61, 65, 155
 in Seljuk Empire, 282
 merchants, 5, 8, 9, 54, 61, 64, 82, 157, 208, 517
 in Egypt, 157, 218, 219, 239, 284, 301–306, 308, 318, 447, 670, 671, 675, 676
 in Europe, 8
 in Hormuz, 519
 in India, 64, 82, 85, 157, 217, 218, 219, 236, 239, 302, 303, 304, 305, 318, 447, 508, 609, 670
 in Ottoman Empire, 450, 508
 in Seljuk Empire, 283, 302
 on Silk Roads, 9, 54, 61, 64, 281, 289, 302
 in Sri Lanka, 86, 225, 304
 in West Africa, 303, 304, 306, 318, 441
 in Yemen, 157, 218, 239, 302–305, 318, 328, 670, 671
 scholars, 151, 164, 166, 167, 285
 Jin dynasty, 155, 160, 288
 Jin people, 161, 190, 191, 201; *see* Jürchen
Jingxingji, 118
Jiutangshu, 24, 26, 31, 38
 Judaism, 9, 627
 Jula people, *see* Dyula
 Jürchen people, 155, 181, 185, 190, 201, 288

Kabir Granthāvali, 477
Kadātuan Srīvijaya, 504

 Kaikkolar guild, 487
 Kajemby people, 393
 Kākātiya dynasty, 221, 233, 606
 Kamakura (shogunate), 176
 Kangnido map, 196, 446
Kano Chronicle, 158
kārimī merchants, 157, 162, 247, 299, 308–309, 310, 314–315, 320, 669, 677
 banking activities by, 676
 disappearance of, 447, 451, 526
 fleeing Egypt, 524, 525, 526
 in Yemen, 532, 533
 land ownership by, 315
 Kawi script, 102
 Kazembe people, 393
 Kāzaruniyan Sufi order, 249, 295, 481
kezhou ships, 187
 Khaljī clan, 231, 241
 Khārijites, 46, 52, 59, 69
 in East Africa, 112, 352
 networks of, 50, 656
kbawājā merchants, 523, 526
 wealth of, 526
 Khazars, 8, 9, 10, 61, 64, 72, 160
 kilns, 342, 363, 368
 in China, 181, 184, 320
Kilwa Chronicle, 344, 345, 346, 347, 348, 349, 350, 360, 366, 596
 kings/kingship, 622
 African, 9, 158
 killing of, 596
 rain-makers, 596
 divine/sacred, 9, 501, 595–596, 598
 East African, 112, 351
 European, 152, 171, 437, 681
 Indian, 217, 221, 222
 symbols of, 95, 591
 Malagasy, 399, 404, 407, 410, 420, 421, 427, 563, 567, 578, 579, 595
 African influences on, 595–596
 divinization of, 428
 and water, 579
 offerings to
 by merchants, 543
 and snakes
 symbolism on, 573, 587, 588
 Southeast Asian, 97, 406, 420, 421, 589

 Burmese, 254
 Javanese, 100, 276
 Khmer, 255
Kitāb al-Fawā'id, 569
Kitāb al-Irtifā', 323, 327
Kitāb al-Minhāj al-fakbir, 569, 570
Kitāb al-Taraffuq fi-al'itr, 152
 knowledge/information, 6, 66, 189, 464, 627, 633, 636, 639, 687
 diffusion of, 4, 5, 11, 22, 23, 29, 46, 54, 55, 65, 66, 73, 148, 151, 161, 166, 167, 168, 181, 189, 200, 236, 286, 293, 296, 309, 379, 438, 444, 446, 450, 579, 630, 634, 637, 663, 686, 688
 monopoly on, 108, 654, 655
 in Muslim world, 44, 158, 108, 592, 655
 kohl, 27, 87, 323, 553, 566
 Kōk Turks, 10, 658
 Konkani language
 influences in East Africa of, 355
 Koran, 42, 54
Korawasrama, 417

 labor, division of
 in China, 156, 182, 472, 674
 in cores, 14, 51, 618, 621, 630, 635–636, 651
 in Europe, 165, 683
 in India, 223, 234, 240, 251, 475, 488
 in Roman Empire, 629
 transregional/international, 171, 618, 619, 621, 629, 630, 634, 635–636, 650, 651, 652, 665, 666, 668, 680
 labor force, 434, 651–654, 678; *see also* *corvées*
 in China, 21, 22, 156, 178, 179, 213, 452, 468, 474, 684, 685, 689
 in cores, 331, 651, 656
 in Europe, 155, 436, 438, 681
 in India, 231, 234, 475, 479, 489, 688
 in Muslim world, 54, 280
 in Southeast Asia, 255, 279

- labor markets, 21, 156, 182, 452,
622, 625, 633, 672, 674,
681, 689
- labor partnerships, 55, 57, 58
- Lalitavistara*, 487
- land guardianship
East African, 550
- land markets, 622, 638, 673, 683
in China, 5, 21, 148, 638, 673
in India, 222
- land ownership, 622, 683; *see also*
iqṭāʿ system
in Byzantine Empire, 10, 154
in China, 20, 31, 32, 178, 179,
180, 182, 185, 192, 202,
213, 463, 472, 473
concentration of, 12, 31, 148,
202, 213, 435, 472
in exchange for military
service, 10, 69–70, 220,
484, 517
in India, 77, 85, 220, 222, 233,
234, 242, 484
by Brahmins, 73, 85, 222,
484
by temples, 233
in Iran, 291
in Muslim Empire, 13, 50,
58, 69
concentration of, 69
in Seljuk Empire, 282
endowments, 282
in Southeast Asia, 255, 274,
276, 512
by temples, 255
by religious institutions
in Muslim world (*waqf*), 282,
310, 530
in Southeast Asia, 276
- land shortages
in China, 684
- lapis lazuli, 25, 225, 261
- law
Islamic
usury prohibition in, 56
Roman
revival of, 152
Legal Code of Malacca, 513
- legends/myths
Arab/Muslim, 345, 394,
415, 569
Bantu, 417, 589
Chinese, 197, 385, 565
Comorian, 369, 409
European, 394, 441
Indian, 134, 404, 408
Malagasy, 125, 366, 372,
392–395, 398, 399, 403,
404, 405, 407, 408,
413–415, 416, 417, 426,
427, 429, 505, 565, 589,
590, 591
Malay, 277, 421
Shirazi, 344, 345, 347, 348, 559,
560, 653
Southeast Asian, 407, 408, 415,
417, 503
- lemon
in Madagascar, 400
spread of, 123
- leopard skins
trade in, 116, 132, 317, 467
Lettre sur le magnétisme, 167
- libraries
in China, 156, 191
in Muslim world, 16, 66,
285, 286
- Lilavati tables, 600
- Liliaceae plants
magical properties of, 415
- lime/limestone, 342, 368, 389,
553, 612
- limits
to economic growth, 690
- Lingayat sect, 233
- Lingwaidaida*, 133, 196, 257, 262,
264, 265
- lingzhi* mushroom motif, 565
- Li-tai Tung-chien chi-lan*, 469
- Liuzhing tu*, 195, 445
- loans, 57, 72, 156, 180, 192, 213, 283,
314, 483, 487, 513, 622,
641, 672, 674, 675
contracts, 56
- Lodi dynasty, 244, 456, 480
- Lodi Treaty (1454), 442, 457
- Lombard League, 154, 167
- Lombards, 9
- longue durée* history, 617
- looms, 23, 48, 102, 156, 171, 191,
234, 287, 487, 488,
523, 559
- lootings
of Alexandria, 315
of Byzantium, 155
of Canton, 24
of Mecca, 68
by Mongols
of Baghdad, 177
of Pagan, 269
in India, 229–230, 232, 241, 244
by Portuguese, 547, 548, 599,
603, 611–613
of Suḥār, 319
- luxury goods
monopolies over, 107, 165, 182,
188, 262, 300, 322, 447,
454, 455, 463, 475, 507,
525, 549, 604, 608, 620,
636, 675, 679
role of/significance of, 652–654,
656, 667, 668, 689
- Ly dynasty, 256
- madder, 309, 323, 480, 533
- madrasas, 66, 150, 157, 166, 168,
281, 285, 286
- Magellanic clouds
navigational use of, 379
- magic
Arab literature on, 593
high places associated with,
420
in control over water by
kings, 419
Islamic, 108, 158, 268, 344, 498,
552, 558, 593
in East Africa, 344, 345, 551
in Madagascar, 108, 404, 551,
590, 592–593
of Liliaceae plants, 415
in Southeast Asia, 89, 418, 419,
420, 498
- magic squares, 46, 593
- Magna Carta*, 153
- Magyars, 9, 16
- Mahābhārata*, 102, 417
- Mahafaly people, 423
- Mahānubhāva sect, 233
- Mahāyāna Buddhism, 253
in India, 84, 85, 86
in Southeast Asia, 93, 255, 257
- Mahdali clan, 352, 367, 370
- Mabriya*, 569
- Maitraka dynasty, 79
- Makoa people, 416
- Makwa language, 355
- Makwa people, 135, 357
- Malagasy language, 126, 132, 134,
384, 390, 395, 398, 400,
403, 410–412, 422–426,
587, 599–600

- Arabic influence on, 407, 576, 579, 591, 593, 599
- Bantu influence on, 132, 396, 397, 398, 406, 586, 591, 595
- loanwords in, 397, 398, 400, 405, 411, 412, 422, 423, 428, 500, 576, 577, 601
- Malay influence on, 126, 132, 134, 384, 400, 405, 406, 407, 411–412, 415, 425, 426, 427, 428, 566, 576, 577, 599, 600, 601
- Sanskrit influences on, 422–423, 425
- use of, 573
- Malagasy people
- genetic data on, 391, 392, 598
- on African origins, 391–392, 598
- Al-Maʿlūqiyā*, 506
- Malay language, 37, 38, 97, 98, 99, 102, 104, 125, 132, 137, 198, 211, 219, 262, 304, 323, 403, 411, 412, 423, 429, 507, 508, 509, 597
- influences of
- on Comorian, 125
- on Malagasy, 126, 132, 134, 384, 396, 400, 405, 406, 407, 411–412, 415, 425, 426, 427, 428, 566, 576, 577, 599, 600, 601
- as *lingua franca*, 104, 448, 497
- Malayālam language, 82
- Malay people, 267, 277, 405, 408, 412, 420, 421, 471, 497, 502, 505, 576, 589, 600
- Malḥamat Dāniyāl*, 594
- Mamluks, 241, 365
- in Egypt, 162, 163, 165, 170, 177, 281, 289, 295, 309–316, 327, 362, 447, 450, 456, 464, 517, 522–531, 673, 675
- mandapikā* (market centers), 86
- Manicheism
- in Central Asia, 31, 50, 164
- in China, 5, 25, 30, 35, 210
- in Muslim Empire, 50
- spread of, 35, 50
- in Sri Lanka, 86
- Manigrāmam guild, 83, 85, 86, 104, 226, 245, 669
- Mao Kun map, 463, 464, 465, 467
- maona di Chio e di Focea (firm), 172
- Māppīla communities/merchants, 82, 237, 246, 247, 447, 489, 492, 608, 609, 677
- maps, *see* cartography
- Maraikkayar Indian Muslims, 246, 489, 507, 608
- markets/market economies, 330, 436, 620, 630, 638, 651, 673, 681; *see also* capitalism; capitalist practices; financial market; labor market; land market
- in China, 5, 21, 148, 156, 192, 474, 673, 674
- emergence of/development of, 620, 621, 622, 638, 672
- in Europe, 152, 170, 625, 626, 679, 681, 683, 685
- in India, 223, 234
- markets for factors, 5, 148, 156, 182, 622, 625, 638, 673, 674, 683
- in Muslim world, 7, 51, 323, 328, 519
- in Southeast Asia, 90, 102, 273, 478
- system of markets, 5, 148, 474, 622, 638, 673, 674
- Maroserāña clan, 421
- Marxism, 152, 651
- Masalik al-Absarfi-Mamalik al-Amsar*, 230, 235
- mathematics
- Chinese, 55, 73, 168, 189, 191, 195, 205
- Indian, 29, 55, 66, 72, 73
- Muslim/Arab, 6, 46, 54, 55, 65, 66, 67, 168, 205, 285, 286, 296, 515, 590
- matjar* institution, 300, 309, 327, 328, 447, 673
- matrilineal transmission
- of names, 595
- of power/lineage membership, 124, 237, 415, 562, 563, 595
- The Meadows of Gold and Mines of Gems*, 60, 115
- medicine
- in China, 189
- in Europe, 15
- in India, 29
- in Muslim world, 296
- melons
- in Madagascar, 396–397
- mercantilism
- in China, 156, 641
- in Egypt, 525
- in Europe, 682–683
- in India, 483, 492, 494, 676
- in Malacca, 505, 676
- mercenaries, use of
- in Byzantine Empire, 10, 154
- in China, 30
- European, 439, 627
- in India, 74, 226, 242
- by guilds, 85, 225
- in Southeast Asia, 276, 506, 510
- in western Muslim world, 46, 306, 529
- merchant-bankers
- in Europe, 152, 171, 175, 437, 682
- in India, 217, 238, 479, 483, 669
- in Muslim world, 64, 301, 314, 669, 676
- merchant-condottieri, 482, 484, 676
- merchant-firms, 64, 443
- merchant-princes, 236, 238, 242, 292, 315, 442
- merchant-states, 447, 486, 497, 503, 678, 679; *see also* city-states
- in Europe, 14, 154, 170–172
- in India, 247, 433, 442, 447, 483, 486, 490
- in Southeast Asia, 169, 170, 448, 496, 497, 501, 502, 503
- Malacca, 505, 509, 519–521
- merchants, *see also* diasporas
- Central Asian, 3, 10, 25, 31, 35, 70, 77, 164, 206, 293, 516, 656
- in China, 205, 209
- in India, 71
- chiefs of, 247, 301, 315, 328, 481, 491, 673

- merchants (*cont.*)
- Chinese, 5, 21, 31, 32, 34, 148, 156, 182, 184, 185, 188, 189, 190, 193, 195, 202, 204, 206, 209, 213, 215, 435, 452, 459, 468, 469, 470, 471, 474, 475, 536, 604, 686
 - in India, 71, 208, 210, 248
 - in Persia, 209, 519
 - in Southeast Asia, 195, 208, 209, 214, 215, 263, 272, 275, 277, 278, 462, 470, 471, 492, 502, 503, 504, 508, 510, 656
 - Comorian
 - to East Africa, 137
 - from cores, 654–659, 662
 - diplomatic role of, 65, 185, 316, 676
 - East African/Swahili, 108, 331, 339, 340, 349, 356, 537, 538, 540, 541, 542, 546, 548, 549, 551, 560, 608
 - in Comoros, 126, 356, 363
 - in China, 461
 - in India, 356, 449
 - in Madagascar, 140–141, 356, 363, 371, 388, 389, 556–559
 - in Malacca, 449, 552
 - in Persia, 519
 - in Yemen, 328
 - European, 8, 10, 14, 15, 56, 57, 153, 154, 155, 162, 165, 169, 170, 171, 172, 173, 175, 200, 210, 285, 386, 290, 293, 295, 301, 308, 311, 312, 314, 436, 439, 441, 442, 443, 450, 454, 469, 517, 523, 524, 526, 528, 529, 531, 609, 626, 681, 682, 683
 - Indian, 75, 76, 77, 84, 86, 149, 217, 218, 222, 223, 224, 225, 226, 227, 228, 232, 233, 234, 235, 236, 238, 239, 240, 246, 247, 305, 315, 446, 447, 479, 480, 483, 485, 486, 487, 488, 489, 490; *see also* Chettis; guilds
 - in Arabia, 162, 309, 319, 323, 324, 328, 447, 524, 530, 532, 533
 - in China, 184, 210, 239, 240, 460
 - in East Africa, 122, 123, 354, 534, 537, 548, 549
 - in Persia, 219, 225, 283, 291, 355, 520
 - in Southeast Asia, 11, 86, 92, 101, 103, 104, 240, 254, 257, 258, 269, 271, 278, 447, 448, 494, 498, 502, 503, 505, 506, 507
 - in Sri Lanka, 85, 225
 - involvement in production, 48, 155, 226, 475, 483, 488
 - Japanese, 207, 460
 - Jewish, 61, 64, 157
 - in Central Asia, 281
 - in China, 63, 209
 - in Europe, 8, 301, 302, 303
 - in India, 63, 82, 85, 218, 219, 236, 239, 302, 303, 304, 305, 609
 - in Malacca, 508
 - in Muslim world, 64, 157, 219, 239, 299, 301–305, 318, 328, 519
 - in Sri Lanka, 86, 304
 - in West Africa, 303, 306, 318
 - Malagasy, 556, 558, 561, 569, 579, 613
 - in Comoros, 125, 130, 368, 569
 - in East Africa, 379, 569
 - Muslim, 48, 49, 50, 51, 53, 56, 57, 58, 59, 60, 61, 62, 65, 154, 157, 162, 281, 300, 304, 306, 308–309, 311, 314, 315, 320, 321, 324, 325, 326, 327, 328, 332, 333, 447, 450, 517, 522, 523, 524, 525, 526, 528, 532, 533; *see also* *kārimī*
 - in China, 7, 27, 29, 31, 37, 63, 134, 183, 184, 201, 205, 309
 - in Comoros, 130, 346, 367, 370, 371, 553–554
 - in East Africa, 7, 108, 111, 113, 119, 120, 123, 134, 196, 333, 346, 348, 349, 367, 534
 - in India, 60, 75, 80, 81, 82, 84, 217, 218, 231, 232, 233, 236, 237, 239, 240, 242, 243, 246, 247, 248, 249, 269, 295, 306, 308, 309, 314, 354, 479, 480, 481, 485, 489, 490, 491, 494, 521, 524, 526, 531, 606, 608
 - in Madagascar, 134, 139, 140, 367, 371, 379, 382, 554, 569–572, 589
 - in Southeast Asia, 92, 251, 258, 269, 275, 498, 501, 502, 505, 512, 521, 670
 - in West Africa, 51, 52, 54, 157, 158, 159, 313, 314, 315
 - Persian, 59, 90, 162, 206, 237, 240, 282, 283, 291, 292, 293, 487, 519, 520
 - in Arabia, 283, 319, 322
 - in China, 31, 63, 199, 209, 293, 469
 - in East Africa, 111, 118, 142, 283, 319, 320, 345, 346, 347
 - in Egypt, 301, 310, 524, 525
 - in Europe, 155
 - in India, 63, 237, 246, 247, 269, 295, 324, 355, 447, 480, 481, 482, 485, 486, 494
 - in Madagascar, 134
 - in Southeast Asia, 63, 92, 295, 494, 498
 - and religion, 670
 - Southeast Asian, 95, 101, 103, 104, 169, 170, 197, 201, 259, 261, 265, 266, 276, 277, 278, 448, 487, 497, 500, 501, 502, 503, 505–509, 510, 511, 609
 - in Arabia, 519
 - in China, 26, 37, 89, 184, 461
 - in East Africa, 132, 135, 379
 - in India, 71, 226, 498
 - in Iran/Persian Gulf, 135, 519
 - in Madagascar, 403–404, 567, 573, 574

- and the state, 58, 84, 153, 155,
225, 238, 249, 301, 304,
326, 349, 441, 443, 447,
455, 469, 533, 539,
672–680, 681, 682,
683, 686
- tax collection by, 32, 65, 101,
103, 182, 204, 205, 218,
226, 234, 259, 261, 276,
292, 293, 301, 676
- wealth of
- in China, 12, 22, 31, 32, 34, 63,
148, 182, 185, 194, 199,
209, 452, 459, 475
 - in East Africa, 330, 336, 349,
351, 357, 359, 536, 547, 551
 - in Egypt, 306, 315, 316, 522,
523, 526
 - in India, 217, 223, 238, 242,
247, 248, 292, 315, 447,
479, 480, 487, 489,
491, 493
 - in Iran, 282, 292, 318
 - in Southeast Asia, 261, 277,
503, 506–508
 - West African, 158, 440
 - in Yemen, 317, 318, 326, 327
- Merina people, 125, 372, 395, 398,
399, 402, 406, 407, 411,
412–416, 417, 419, 420,
421, 425, 427, 428, 429,
561, 573, 578, 587, 591,
593, 595, 596, 599, 650
- metallurgy, *see* bronze; copper;
iron
- middle classes, *see* bourgeoisie
- migrations, 628, 642
- in China/to China, 11, 12, 50,
63, 161, 178, 190, 191
 - to Comoros, 124–125, 366,
367, 552
 - to East Africa, 54, 109, 119, 121,
131, 135, 344, 345, 346,
347, 348, 352, 538
 - in Europe, 15
 - in India, 82, 487
 - to India
 - of Africans, 479
 - of Austronesians, 135,
410
 - of Hadramis, 237, 447
 - of Iranians, 50, 82, 237, 243,
447, 481
 - of Jews, 82
 - to Madagascar
 - of Austronesians, 138, 139,
371, 372, 376, 377,
402–429, 555, 556, 567,
573–577, 578, 648
 - of Bantus, 37, 138, 388,
391–402, 555, 586
 - of Arabo-Persians, 138,
371, 559
 - to Southeast Asia
 - of Chinese, 207, 209, 278,
435, 448
 - of Indians, 73, 264, 448, 630
 - of Muslims, 105, 251, 267,
269
 - mihlabs
 - in Comoros, 369, 370, 374,
552, 553
 - in East Africa, 109, 344, 346,
350, 352, 354, 535, 536
 - in Madagascar, 557, 558
 - militarization, 160
 - in India, 232, 233, 234, 249
 - in Ottoman Empire, 450,
516, 517
 - in pastoral societies, 160,
643, 666
 - in Southeast Asia, 509, 511
 - military colonies
 - in China, 147, 178, 213, 468
 - military organization, 618, 637,
640; *see also* *iqṭāʿ*
 - Byzantine, 9, 10, 154
 - in China, 19, 30, 36, 147, 156,
178, 186, 202, 213, 452,
473, 474
 - in India, 76, 220, 231, 241, 244,
365, 483, 484, 485, 487
 - in Japan, 199, 215, 470
 - Mongol, 161
 - in Muslim world, 46, 70, 281,
294, 299, 309, 447
 - Ottoman, 450, 517
 - in Southeast Asia, 509
 - military service in exchange for
landownership; *see also*
iqṭāʿ
 - in Byzantine Empire, 10
 - in India, 220
 - in Russia, 451
 - military technology, 634, 637; *see*
also cannons; cavalry;
crossbows; gunpowder;
guns
 - in China, 20, 23, 148, 173, 181,
191, 203, 467, 633
 - in Europe, 163, 173, 455
 - impact of, 517
 - in India, 235, 241, 249, 478, 485,
492, 507, 537
 - Mongol, 203, 289
 - in Muslim world, 163, 173, 312
 - Ottoman, 449, 450, 529
 - in Southeast Asia, 507, 510
 - millennarian movements, 297, 518
 - Miller Atlas, 164, 575
 - Minamoto clan, 199
 - Ming dynasty, 175, 176, 212–215,
277, 434–435, 456,
458–476, 634, 660
 - Mingshi/Ming Shi-lu*, 462, 463,
496, 505, 509, 510,
511, 552
 - minting, 626
 - in Central Asia, 230
 - in China
 - Ming period, 434, 452, 458,
473
 - Song period, 188, 194
 - Tang period, 5, 30, 34
 - in East Africa, 342, 345, 346,
352, 361, 363, 547
 - in Egypt, 53, 81, 291, 302, 310,
314, 522, 524, 530
 - in Europe, 15, 165, 314, 443,
491, 524
 - in India, 77, 81, 84, 94, 173, 217,
223, 228, 229, 230, 231,
232, 235, 238, 245, 480,
489, 492
 - in Muslim world, 10, 44, 51,
70, 291
 - in Sind, 81
 - in Southeast Asia, 92, 93, 94,
95, 259, 260, 262, 268,
279, 497, 498, 510
 - in Java, 98, 259, 279, 513
 - in Malacca, 497
 - in Vietnam, 96, 256, 273
 - in Yemen, 324
 - Mishna, 56
 - miticals (gold unit of mass),
599
 - Der moderne Kapitalismus*, 152
 - modernity, European, 167,
455, 688
 - modernization, 618, 670
 - Mohist school of thought, 627

- monasteries
 Buddhist
 in China, 27, 28, 30, 35, 40
 in Japan, 35, 199
 in India, 84, 86, 100, 228
 in Southeast Asia, 94, 97, 253, 678
 Christian
 in Europe, 7, 15
 Hindu, 75, 236
monetization, 626; *see also* coins;
 minting
 in Afro-Eurasian world-system, 669
 in China, 5, 21, 32, 148, 184, 188, 193, 452, 475
 in Egypt, 530
 in India, 72, 77, 94, 231, 238, 242, 486
 in Japan, 28, 200
 in Southeast Asia, 98, 101, 238, 261, 272, 275, 512–514
 Ayuthiā, 510
 Burma, 255
 Java, 98, 101, 261, 265, 272
 Khmer state, 255
 Vietnam, 257
monetization/monetary systems,
 672, 683; *see also* coins;
 cowries; currencies;
 money
 in Afro-Eurasian world-system, 438, 450, 669
 in China, 21, 32, 33, 34, 148, 156, 184, 188, 194, 201, 213, 452, 475, 478, 480, 486, 674
 in Egypt, 173, 303, 312, 528–530
 in Europe, 44, 165, 171, 173, 442, 524
 in India, 11, 72, 77, 79, 94, 231, 238, 242, 448, 480, 486
 in Japan, 28, 36, 200
 Iron Age, 626
 Malagasy, 599–600
 in Muslim world, 44, 51
 in Southeast Asia, 101, 260, 275, 497, 512–514
 Ayuthiā, 510
 Burma, 255
 Java, 98, 101, 102, 260, 261, 265, 272
 Khmer state, 255
 Vietnam, 257
money, 54, 669; *see also* coins;
 currencies;
 monetization
 availability of
 and production, 184
 of core
 imposition of use of, 184, 657
 paper
 in China, 34, 148, 156, 161, 169, 184, 188, 193, 194, 201, 202, 204, 212, 213, 434, 435, 450, 458, 473, 669
 in Europe, 442
 in Persia, 291
 pluralism of, 657
money markets
 in Europe, 165–166, 171
 in world-system, 641
monks, Buddhist
 Indian Ocean knowledge of, 38
 pilgrimages by, 5, 27, 29, 75, 84, 89
Monophysitism, 43, 53, 154
monopolies
 as capitalist strategy, 165, 435, 441, 455, 507, 672, 675, 679
 on luxury goods, 165, 182, 187, 188, 549, 652
 of state
 in China, 5, 26, 32, 156, 182, 187, 188, 192, 463, 474, 475, 674
 in East Africa, 349, 549
 in Egypt, 300, 301, 447, 525, 675
 in Europe, 154, 437
 in Portugal, 454, 548, 604, 607, 608
 in Ottoman Empire, 517
 in Southeast Asia, 497, 503
 in Yemen, 322
 in unequal exchanges, 107, 117, 158, 330, 636, 652, 654, 655
 in world-system, 107, 158, 330, 636, 652, 654, 655, 662, 675
monsoons, 603
 in China, 646
 high, 4, 242, 272, 299, 341
 sailing by, 62, 111, 157, 196, 218, 381, 383, 666
 weak, 12, 62, 160, 174, 243, 273, 300, 327
moon eclipses
 Malagasy rituals and traditions
 on, 408, 594
mosques
 in China, 29, 184, 209, 210
 in Comoros, 142, 366, 369, 370, 552, 553, 597
 East African, 17, 109, 111, 122, 342, 343, 344, 346, 348, 350, 351, 352, 353, 355, 357, 361, 366, 535, 536, 539, 549
 in India/Pakistan, 237, 239, 248, 356, 492, 535, 551
 Malagasy, 374, 557, 558, 563, 612, 615, 648
 in Muslim Empire, 66, 69, 282
Mtambwe treasure, 348
mufāwāḍa (partnership agreements), 55
Mulakkkhaṣ al-ḥiṭān, 363, 531
mung beans
 in Madagascar, 397
Mūṣakavamsa, 489
musk
 production of, 429
Muslims, *see* Islam
Muʿtazila school of Islamic theology, 65, 66, 68, 167
Myazedi pillar, 253
myrrh, 27, 38, 196, 197, 208, 266, 339, 663
myths, *see* legends/myths
nādu, 221, 223, 224, 239, 484
Nāgarakertagāma, 271, 277, 278
nagaram (market centers), 86, 223, 224, 226
Nāgarī script, 98, 102
Nānādēsi (merchant corporation/guild), 225, 226, 240
Nandikkalambakam, 86
Naqshbandiyya, 516
Narrinai, 234
nautical books, 163, 379, 546, 553, 569, 570, 571, 572
navigation, *see also* Austronesians;
 Jacob's staff; rudders;
 sails; ships
 around Africa, 537
 around Ancient World, 172

- by Arabo-Persians/Muslims,
 - 59–63, [III](#), [II](#)9, 292, 322, 352, 379, 491, 538, 551, 553, 569–572
- by Chinese, 38, 39, 40, 186, 187, 206, 239, 263, 460–467
- by Comorians, [I](#)37, 376
- by East Africans, [III](#), [I](#)24, 343, 347, 366, 551
- by Europeans, [I](#)72, 439, 569, 602–616
- of Indian Ocean, [I](#)2, 62, 218
- by Indians, [I](#)21–[I](#)22, [I](#)19–[I](#)20, 239, 240, 246, 324, 478, 479, 491, 503, 506, 507, 508, 551
- by Malagasy people, [I](#)38, [I](#)40, 379, 381–382, 569
- with monsoons/seasonal, 218, 308, 506
- of Persian Gulf, 3, [II](#), 38, 39, 59, 62, 70, [II](#)7, [I](#)49, [I](#)56, [I](#)62, 249, 283–284, 291, 295, 317, 353, 514–521, 605, 620, 629, 665
- of Red Sea, [I](#)2, [I](#)6, 65, 70, [I](#)20, [I](#)36, [I](#)49, [I](#)57, [I](#)62, 283–284, 298, 300, 307–310, 314, 316, 317, 322, 324, 353, 447, 451, 514, 519, 521, 523, 525, 526, 532, 629, 665, 666, 667
- by Southeast Asians, 95, 98, 99, [I](#)02, [I](#)31–[I](#)37, [I](#)11, 263, 276, 499–504, 507, 573–575
- by stars, 37, 466, 467, 479, 553, 570–572
- nayankara* system, 484
- Nāyar caste, 489
- nāzirs* (customs inspectors), 326
- neo-Confucianism
 - emergence of, 637
 - in China, 35, [I](#)75, [I](#)89, [I](#)91, [I](#)12, [I](#)13, 638, 687
 - in Vietnam, 511
- Nestorian Christianity/
 - Nestorians
 - in China, 5, 24, 30, 35, 205, [I](#)10
 - in India, 83, 304, 305, 491, 609
 - in Iran, 290, 293
 - in Mongol Empire, 289
 - in Muslim Empire, 61, 63, 65
 - in Southeast Asia, 63, 508
 - trade by, 670
- New History of the Tang Dynasty*, [I](#)00; see *Xintangshu*
- new year celebrations; see also *Caitra* festival
 - Balinese, 577
 - Malagasy, 424, 425, 577, 587
 - Persian, 347
 - in Zanzibar, 577
- Ngaju language, 407, 425, 587, 601
- Ngaju people, 408, 419, 588
- Ni'matullāhī Sufi order, 481
- Ningbo, [I](#)95–[I](#)200
- nomadism, see *pastoralism*
- Nong shu*, [I](#)68
- Normans
 - conquests of, [I](#)53, [I](#)77
- Novum organum*, [I](#)64
- numerical calendars, 423
- numerical systems
 - decimal, 288, 423
 - Indian, 55, 73
 - in Muslim Empire, 54
- Nūr al-ma'ārif*, 293, 322, 325, 327
- nutmeg
 - trade in, 27, 90, [I](#)03, [I](#)98, 250, 264, 266, 297, 443, 445, 507, 510
- offerings, see also *donations*
 - religious
 - in East Africa, 357
 - in India, 73, 76, 84, 220, 222, 226, 228
 - in Madagascar, 407, 417, 427, 428, 564, 577
 - in Muslim world, 209, 249, 282, 310, 318, 325, 530, 532
 - in Southeast Asia, 94, 240, 253, 254, 255, 256
 - to kings/rulers
 - Chinese, 37, [I](#)84, 347, 461
 - East African, 543
 - Egyptian, 313, 327
 - Southeast Asian, 254
 - Yemeni, 328, 532, 533
- oligopsony, 330, 655
- On Calculation with Hindu Numerals*, 54
- onions
 - taboo on, 416
- Oort minimum, [I](#)47
- opium trade, 654
 - Arab, 506, 533, 537
 - Egyptian, 533, 537
 - Indian, 480, 494, 506, 537
 - Southeast Asian, 510
- ortaq* merchant guilds, [I](#)64, 205, 289, 677
- painting
 - Chinese, 22, 30, 45, [I](#)88
 - European, 445
- Pāla dynasty, 83, 84, 91, 97, 221, 228, 271
- palaces
 - commercial role of, 620, 621
- Pallava dynasty, [I](#)6, 79, 84–86, 87, 221
- Pallava script, 88, [I](#)02, 265
- Pāndya dynasty/people, 84, 87, [I](#)03, 228, 232, 236, 238, 240, 241, 278, 292, 324, 325
- paper industry/production
 - in Central Asia, 45, 46
 - in China, 4, 22, [I](#)81, [I](#)84, [I](#)88, [I](#)92, 200, 208, 470, 475, 628, 635
 - in Europe, [I](#)51, [I](#)64, 438
 - in India, 235, 302
 - in Muslim world, 46, 49, 66, 286, 300, 302, 667
- introduction of
 - in Europe, [I](#)51, 634
 - in India, 76
 - in Muslim world, [II](#), 31, 45, 46
- paper money
 - in China, 34, [I](#)48, [I](#)56, [I](#)61, [I](#)69, [I](#)84, [I](#)88, [I](#)93, [I](#)94, 201, 202, 204, 212, 213, 434, 435, 450, 458, 473, 669
 - in Europe, 442
 - in Persia, 291
- Papuans, 37, 38, 99
- Paramāra dynasty, 216
- Pararaton*, 277
- Pardeshī merchants, 237, 247, 447, 481, 486, 489, 608
- parliaments, [I](#)53, 437, 682, 686, 687
- Parsis, 50, 82, 480
- pastoralism
 - in Central Asia, [I](#)60, 288, 625, 633, 642, 643, 664

- pastoralism (*cont.*)
 in East Africa, 106, 110, 334, 336, 337, 340, 341, 365, 539, 547
 in Egypt, 316
 in India, 221
 in Madagascar, 140, 372, 389, 390, 391, 429, 647, 649
 and sedentary populations, 174, 221, 596, 625, 642, 643, 664
 in Sudan, 174
 patent protection
 in Europe, 438
 pawn shops, 437
 pepper
 cultivation of
 in India, 208, 221
 in Southeast Asia, 208, 246, 261, 264, 268, 497
 maniguettes, 158
 prices of, 265, 305, 315, 320, 324, 443, 490, 523, 525, 526, 527, 529, 532, 604
 taxes on, 236, 471
 trade in, 42, 103, 201, 206, 208, 215, 443, 471, 510, 523
 by Egypt, 443, 523, 525, 526, 527, 529, 532, 604
 by India, 208, 220, 221, 233, 268, 302, 305, 320, 322, 328, 332, 447, 490, 491, 492
 by Portuguese, 454, 463, 604
 by Southeast Asia, 103, 198, 208, 246, 252, 261, 264, 275, 444, 497, 498, 503, 504
 wild Malagasy, 394
 perfume production
 in India, 58, 80, 208
 in Muslim world, 49, 62, III, 394
 in Southeast Asia, 198
 perfume trade, 91, 118, 197, 208, 221, 225, 236, 250, 318, 515, 547, 654
 peripheries
 African interior, II, 330, 331, 332, 542–546
 agency of, 546–547, 658, 661
 Americas, 666
 and cores, 331, 356, 636, 638, 642, 650–660, 661, 662, 663, 671
 development of, 663
 elites in, 659, 662
 Europe, 150, 438, 664
 Madagascar, 645, 649
Periplus of the Erythraean Sea, 60, 247, 349, 355, 364, 668, 669
 Persian culture, 66, 67, 229, 231
 in China, 205
 in East Africa, 345, 347, 348, 351
 in India, 241, 243, 269, 477, 481, 487, 493
 in Southeast Asia, 295
 Persian language, 25, 27, 49, 56, 57, 99, 120, 134, 164, 169, 197, 234, 236, 282, 323, 345, 346, 351, 379, 383, 385, 392, 395, 399, 400, 576
 as *lingua franca*, II, 231
 use of, 44, 64, 199, 231, 280, 295, 316, 462, 478, 481, 485, 493, 516
 Persians
 in Arabia, 43, 59, 284, 302, 319, 320, 322, 324, 326, 533
 in China, 5, 12, 23, 24, 26, 31, 35, 38, 63, 104, 168, 198–199, 205, 208, 209, 210, 212, 295, 347, 469
 in East Africa, 108, 109, III, 114, 117, 118, 120, 149, 346, 347, 348, 353
 in Egypt, 294, 301, 525
 in Europe, 518
 in India, 50, 81, 83, 231, 234, 236, 237, 243, 246, 247, 269, 355, 447, 479, 480, 481, 482, 486, 520
 merchants, II, 37, 38, 59, 60, 61, 70, 90, 108, III, 118, 134, 162, 199, 208, 236, 247, 249, 282, 292, 293, 294, 295, 301, 305, 318, 319, 353, 469, 480, 481, 482, 486, 494
 in Muslim Empires, 44, 55, 57, 61, 65, 67, 136, 281
 in Southeast Asia, 63, 90, 103, 104, 498, 510
 philosophy/philosophers, 637, 638
 Buddhist, 29, 627
 Chinese, 22, 23, 35, 175, 185, 189, 257, 463, 471, 627, 637, 638, 687, 688
 European, 151, 153, 167, 189, 438, 442, 687, 688
 Muslim influence on, 150, 151, 286, 684
 Greek, 65, 151, 167, 168, 627, 684
 Jewish, 285
 Muslim/in Muslim world, 6, 65, 66, 150, 167, 285, 286
 in Southeast Asia, 511
 pigeon peas, 123
 in Madagascar, 397, 579, 600
 pigeons
 navigational use of, 379
 pigs
 taboo on, 406
 pilgrimages
 Buddhist, 29, 38, 61, 71, 75, 76, 86, 88, 89, 98, 225, 667
 Christian, 285, 307
 Hindu, 233
 Malagasy, 125, 559, 596–598
 Muslim, 49, 60, 157, 199, 210, 249, 283, 308, 309, 313, 405, 506, 522, 525, 559, 670
 East African, 357, 359, 535, 551
 to Mecca, 313, 522
 Shiite, 43
 pre-Islamic
 to Mecca, 42
Pingzhou ketan, 186, 197, 262
 piracy/pirates
 Chinese/in China, 63, 195, 202, 215, 435, 462, 469, 472
 Indian, 60, 70, 219, 325, 365, 442, 497, 605, 606, 678, 680
 Javanese, 435, 469, 472
 Malagasy, 381
 in Mediterranean, 175
 in Persian Gulf, 59, 605
 Portuguese, 454, 604
 in Red Sea, 308, 321
 in Socotra, 70, 325
 in Southeast Asia, 90, 274, 462, 496, 603, 605, 606
 in Sri Lanka, 606
 plague epidemics, 174, 176, 177
 in China, 33, 174, 212, 644
 in East Africa, 338, 366
 in Egypt, 174, 315, 446, 456, 522, 525, 644

- in Europe, 10, 174, 436, 438
 - in Persia, 296
 - in western Asia, 296, 446, 644
 - in Yemen, 533
- plantains, 397, 398, 623
- plantations
 - Portuguese, 439, 545
- plants
 - as decorative motifs, 565
 - hierarchies of
 - in Madagascar, 427
 - introduction/transfers of
 - into China, 34, 685
 - into Comoros, 126
 - into East Africa, 121, 123, 329
 - into Europe, 49, 684
 - into India, 623
 - in Muslim Empire, 6, 47, 635
 - into Madagascar, 385, 396, 397, 429, 647
 - into Southeast Asia, 208, 261
- plows, 7, 8, 20, 150, 257, 628, 635, 687
- poetry
 - Indian, 74
 - Persian, 296
- political fragmentation/
 - disintegration
 - in world-systems, 159, 633, 639, 640, 643
- political integration
 - and economic growth, 630, 633, 639, 673
- political power/role, 672–680, 681, 682, 683, 686
 - of merchants
 - in East Africa, 349, 539
 - in Egypt, 301, 447, 676
 - in European cities, 153, 155, 441–442, 455, 469, 674, 677, 679, 681, 682, 683, 686
 - in Hormuz, 520
 - in India, 84, 225, 238, 249, 676, 677
 - in Malacca, 506
 - in Muslim Empire, 58, 676
 - in Yemen, 304, 326, 533
- polyglossia
 - in Egypt, 316
- popes, 7, 151, 152, 154, 166, 167, 170, 175, 210, 289, 325, 433, 439, 442, 446, 530
 - power of, 152, 171
- population; *see also* demographic
 - growth; deportations; demographic declines
- Asian
 - size of, 156
- density of
 - and division of labor, 634
 - and innovations, 635
- of world
 - size of, 16, 671
- porcelain, 5, 21, 330, 636, 652
 - Chinese
 - production of, 5, 21, 156, 161, 190, 208, 434, 458, 475, 667
 - trade in, 59, 62, 64, 119, 185, 187, 204, 208, 243, 250, 264, 265, 266, 268, 279, 281, 284, 294, 311, 314, 317, 318, 320, 330, 336, 340, 353, 354, 363, 367, 375, 386, 389, 410, 444, 452, 470, 471, 491, 498, 520, 521, 532, 536, 540, 553, 559, 565, 568, 582, 583, 601, 636, 652, 654
 - imitations of, 118, 314, 375, 448, 512, 519, 641
- portolans, 172, 446, 479
- portrait painting
 - Chinese, 188
 - European, 445
- ports
 - cosmopolitanism of, 11, 62, 170, 278, 322, 448, 501, 506, 519, 533, 548
- Portuguese, 435, 439, 441, 451, 453, 455, 607
 - in East Africa, 336, 355, 358, 454, 457, 478, 541, 544, 546, 547, 548, 550, 603, 604, 607, 608, 659
 - in eastern Asia, 456, 471, 604
 - in Hormuz, 454, 457, 520, 603, 607, 609
 - in India, 454, 456, 478, 489, 490, 491, 508, 526, 602, 603, 604, 605, 606, 607, 608, 609
 - in the Indian Ocean, 440, 453, 454, 456, 494, 530, 533, 534, 574, 577, 602–610, 649, 680
- in Madagascar, 404, 409, 413, 553, 556, 561, 610–616
- in Southeast Asia, 454, 456, 507, 603, 607, 609
- spice trade controlled by, 604
- in West Africa, 439, 440, 441, 454, 456, 543, 605, 638
- postal services
 - Chinese, 4, 21, 169, 213
 - Egyptian, 310
 - European, 163
 - Mongol, 289
- pottery, *see* ceramics
- power, *see also* political power
 - of cores, in world-systems, 636, 650–665
 - and economics, 155, 330–332, 636, 650–657, 658, 659, 660, 661–665, 679, 682, 686
 - gifts as exercise of, 359
 - and ideology/religion, 332, 551, 636, 637, 638, 651, 652, 653, 654, 656, 657, 659, 662, 663, 665, 671, 678, 680
 - in Central Asia, 160
 - in China, 213, 619, 629, 685
 - in East Africa, 109, 332, 338, 551, 662
 - in Europe, 640, 658, 682, 686, 687, 688
 - in Muslim Empires, 41, 281
 - in Southeast Asia, 100
- matrilineal transmission of, 124, 237, 415, 562, 563, 595
- and metallurgy, 334
- military, *see* military technology
- of peripheries, 330, 331, 658, 659
- and religion, 592, 678
- of semi-peripheries, 658, 663
- Pratica della Mercatura*, 169
- precious metals, *see* gold; silver
- precipitation
 - decline in, *see* aridification
 - increase in; *see also* monsoons
 - in Central Asia, 3, 148, 288, 434, 472
 - in China, 3, 20, 147, 148, 174
 - in East African interior, 365
 - in Europe, 173

- precipitation (*cont.*)
 in India, 148
 in Indian Ocean region, 42, 300, 341
 in Palestine, 285
 in Southeast Asia, 148, 253, 255, 257, 272
- prestige goods, *see* luxury goods
- prices
 control by states
 in China, 5, 21, 674
 in Egypt, 300, 525, 528, 529, 675
 in India, 242, 490
 in Iran, 291
 in Southeast Asia, 260, 265
 in Yemen, 323, 531
 determination of
 in India, 224
 in world-systems, 655, 656, 661
 drop in
 in Europe, 174, 451
 fluctuations of, 672
 in Egypt, 311
 in India, 224
 in Mesopotamia, 623
 in Southeast Asia, 265
 of goods
 cloves, 443, 527
 copper, 202, 669
 cowries, 250
 ginger, 526, 527
 gold, 200, 313, 441
 grain, 5, 21
 horses, 32, 235, 249, 293, 468
 iron, 181
 ivory, 541
 pepper, 265, 315, 320, 324, 523, 526, 527, 529, 532, 604
 silk, 170, 472
 silver, 212, 213, 229, 450
 slaves, 46, 249
 spices, 444, 530
 increase in, 184
 in China, 35, 205
 in Europe, 171, 174, 450, 451
 in India, 242, 244
 in Muslim Empire, 51
- printing
 in Central Asia, 163
 in China, 22, 148, 188, 189, 191
 in Europe, 163, 294, 438, 634
 in Japan, 22
 in Korea, 22, 189
 in Muslim world, 163, 168, 296
 in Egypt, 168, 296
- private sector/enterprises, 153
 in China, 11, 34, 148, 156, 180, 184, 186, 187, 189, 190, 191, 194, 195, 199, 208, 214, 248, 434, 452, 464, 474, 629, 637
 in East Africa, 538
 in Egypt, 157, 162, 284, 308–311, 314, 315, 528, 624
 in Europe/European, 154, 170, 171, 175, 436, 437, 528, 603, 609, 626, 637, 672, 679, 683, 684
 in India, 84, 85, 222, 225, 234, 237, 238, 239, 246, 247, 447, 448, 479, 480, 481, 486, 487, 489, 491, 670
 in Iran/Persian Gulf, 291, 292, 293, 300, 519–520
 in Japan, 199, 200
 in Mesopotamia, 622
 in Muslim Empire, 58, 62, 65, 670
 in Southeast Asia, 278, 501–503, 506–509, 513
 in Yemen, 302, 323, 324, 673
- and state, 617, 638, 665, 672–680
 in China, 20, 21, 156, 180, 184, 189, 191, 192, 193, 195, 202, 209, 215, 435, 452, 459, 460, 463, 468, 469, 686
 in East Africa, 349, 538, 539
 in Egypt, 300, 301, 314, 316, 447, 523, 525, 526
 in Europe, 152, 153, 155, 171, 436, 441, 443, 455, 469, 629, 677, 679, 681, 682, 683, 684, 686
 in India, 217, 222, 224, 238, 240, 242, 247, 249, 480, 482, 485, 491
 in Iran/Persian Gulf, 292, 520
 in Japan, 200
 in Muslim Empire, 7, 49, 50, 58, 63–64, 66
 in Ottoman Empire, 517
 in Southeast Asia, 262, 278, 505–509, 679
 in Yemen, 304, 322, 326, 327, 328, 533
- production, costs of, 192, 206, 330, 641, 654, 674, 681
 of coins, 194
- productivity, 545, 630, 635, 651, 652, 655, 656
 in China, 148, 182, 685
 in Europe, 438, 684, 688
 increases, 148, 635, 651, 652, 656, 684, 685, 688
 in India, 684
 in Southeast Asia, 275
- profits of trade, 171, 435, 636, 651, 654, 656, 673, 675, 686, 689
 in China, 34, 179, 190, 191, 192, 195, 209, 212, 215, 469
 in East Africa, 339, 368, 538, 541, 542, 543, 545, 546, 548, 603
 in Egypt, 304, 525, 528, 529
 by Europeans, 443, 538, 602, 604, 608, 679, 686, 688
 in India, 236, 477, 485, 494, 606
 in Japan, 460
 in Mesopotamia, 620, 622, 623
 in Muslim Empire, 54, 55, 56, 57
 pepper, 443, 444, 604
 in Persian Gulf/Iran, 292, 295
 in Southeast Asia, 95, 252, 263, 264, 272, 444, 492, 508, 509, 513
- textiles, 314, 541
 in West Africa, 441
 in Yemen, 323, 326
- progress, European views
 on, 688
- Prolegomena*, 634
- property rights, 634, 677, 683
 in China, 21, 191, 192
 in Europe, 152, 171, 677, 683, 684
 in India, 222
 in Japan, 200
- Protestantism, 670
- public sector, *see* states; temples
- public works
 in China, 18, 19, 639
 in Southeast Asia, 276
- Purāna*, 74
- purity
 in East Africa, 358, 594

- in India, 75, 488
 - in Madagascar, 404, 594
- Pyu people, 93, 95, 253
- Qādiriyya Sufi brotherhood, 481
- Qahtānī al-Wā'il clan, 352
- qanāt*, 47, 51
- Qarmatians, 13, 17, 67, 68, 69, 281, 283
 - in East Africa, 120, 347, 348, 349
 - in Persian Gulf region, 59
- qilin* mythical beast motif, 565
- quartz
 - presence of
 - in Comoros, 125, 130
 - in East Africa, 116, 121, 377
 - in Madagascar, 140, 374, 559, 566
 - use of, 125
- Quraysh tribe, 42
- Radhanites, 5, 9, 61, 64, 302
- Rahnāmaj*, 526
- rainmakers
 - African kings as, 596
 - in Khazaria, 9
 - in Madagascar, 596
- ra'īs al-tujjār* title (chief of the merchants), 328
- Rāmacarita*, 83
- Rāmāyana*, 102
- Rāshtrakūta dynasty, 13, 16, 72, 76, 80–83, 84, 87, 217, 633
- Rasikaj people, 377, 378, 392, 394, 557, 568, 569, 600
- Rasūlid archives, 240, 308, 309, 314, 319, 321, 353, 363
- Rasūlid dynasty, 162, 177, 248, 301, 311, 312, 313, 315, 316, 317, 321–328, 352, 447, 457, 524, 529, 531–533, 674
 - donations by, 313, 324
 - fall of, 532
- rationalism
 - in Abbassid Empire, 68
 - and capitalism, 171, 672, 679, 681, 688
 - in China, 179, 189, 637
 - development of, 53, 167, 620, 627
 - in Europe, 153, 165, 167, 672, 679, 681, 683, 688
 - in Muslim Spain, 53, 167, 286
- rationalization
 - of state power, 637, 683
- rats, 338
- rebellions, revolts
 - in China, 212
 - Ming period, 212, 214, 435, 456, 472, 473
 - Song period, 190, 202
 - Tang period, 12, 16, 30, 31, 32, 33, 38, 45
 - Yuan period, 175, 176, 205, 212, 295
 - in Egypt, 307, 451, 525, 529, 530
 - in India, 173, 239, 241, 243, 244, 484, 493
 - in Iran, 294, 609
 - in Japan, 470
 - in Korea, 31
 - in Muslim Empire, 6, 13, 17, 36, 44, 68, 69, 113, 280, 281, 349
 - in Southeast Asia, 274, 501
 - of slaves, 13, 17, 36, 68, 69, 113
 - in western Asia, 518
 - in Yemen, 327
- recession periods
 - in Afro-Eurasian world-system, 3, 13, 16, 36, 91, 138, 173–175, 215, 245, 251, 327, 433, 617, 639–645, 658, 660, 664, 690
 - in Asia, 154, 685
 - in Byzantine Empire, 9, 10, 14
 - in China, 30, 32, 35, 36, 161, 175, 202, 212, 276, 435, 468, 475, 634, 665
 - and climate change, 12, 35, 173–174, 199, 274, 327, 388, 435, 623, 625, 642–643
 - in East Africa, 175, 365, 366, 449, 535
 - in Egypt, 173, 175, 315–316, 447, 451, 454, 522, 531
 - in Europe, 166, 173
 - in India, 72–73, 83, 228, 244–245, 486
 - innovations in, 635, 638
 - in Iran, 16, 291, 296
 - in Japan, 28, 36, 185, 199
 - in Khazaria, 16
 - on Madagascar, 573, 648
- in Muslim Empire, 12, 13, 67–70
- in western Asia, 446
- in Yemen, 327, 532
- Red Turbans, 212
- reeling machines, 156, 163
- Reformation, 445, 455
- reforms
 - legal/institutional
 - in Europe, 152, 153
 - organizational
 - in Byzantine Empire, 9
 - in China, 19, 148, 161, 180, 202, 452, 628, 636, 638
 - in Egypt, 312, 523–524
 - in India, 86, 223, 231, 242, 482
 - in Iran, 294
 - in Muslim Empires, 44, 47, 281
- regicide, 595
- reincarnation beliefs, 588–589, 627
- relics, keeping of
 - in Madagascar, 596
- religion; *see also* Buddhism; Christianity; Daoism; Hinduism; Islam; Judaism; Manicheism; Zoroastrianism
 - in Central Asia, 3, 30, 31, 44, 50, 54, 229
 - in China, 18, 22, 24, 28–30, 35, 175, 189, 205, 210, 257, 463, 468, 627, 637, 638
 - and domination of cores, 108, 329, 454, 638, 655, 659–662
 - in East Africa, 54, 108, 109, 329, 331, 338, 344, 345, 347, 348, 349, 350, 351, 352, 357, 538, 549, 551, 655, 662
 - in Egypt, 44, 162, 301, 308, 310, 311
 - in Europe, 7, 54, 152, 154, 155, 166, 167, 171, 439, 442, 445, 451, 453, 670
 - heterodox movements in, 13, 641

- religion (*cont.*)
- in India, 11, 50, 74, 75, 76, 77, 80, 82, 83, 84, 86, 217, 220, 222, 226, 228, 231, 233, 237, 238, 239, 243, 247, 248, 295, 305, 447, 477, 479, 480, 481, 484, 486, 493, 627, 670
 - in Iran, 249, 290, 294, 295, 352, 516, 518, 627
 - in Japan, 5, 22, 28, 35, 199, 200
 - in Korea, 463
 - in Madagascar, 371, 396, 404, 414, 416, 417, 424–425, 558, 577, 587–589, 590, 591, 596, 597–598
 - in Mongol Empire, 161
 - in Muslim Empires, 6, 13, 43, 46, 50, 54, 61, 64, 66, 67, 68, 69, 149, 150, 168, 280, 281, 282, 285
 - in Ottoman Empire, 518
 - and politics, 35, 68, 69, 74, 76, 77, 100, 108, 233, 239, 253, 257, 273, 281, 304, 321, 324–325, 331, 338, 347, 352, 417, 454, 482, 484, 534, 550, 551, 591, 620, 637, 638, 659, 670, 678
 - and reason
 - in Europe, 167
 - in Muslim world, 65, 66, 68, 286
 - in Southeast Asia, 11, 88, 89, 92, 93, 94, 95, 96, 97, 100, 103, 104, 253, 254, 255, 257, 258, 259, 260, 268, 269, 270, 271, 272, 273, 276, 278, 498, 500, 505, 510, 511, 670
 - and trade, 50, 104, 119, 168, 278, 669–670
 - in West Africa, 157–158, 306, 454
 - in Yemen, 70, 302, 304, 317, 321, 534, 597
- religious intolerance
- in China, 12, 35
 - in Europe, 9, 175, 453, 454, 606
 - in Muslim world, 150, 168, 296
- religious syncretism
- in India, 233, 268, 477
 - in Southeast Asia, 91, 96, 255, 258, 268, 271, 505, 589
- religious tolerance
- in China, 5, 462
 - in (port) cities, 671
 - Hormuz, 519
 - Malacca, 506
 - of guilds, 226, 305
 - and long-distance trade, 304–305, 479, 638
 - among merchants, 226, 237, 304–305, 479, 609
 - in Mongol Empire, 164
 - in Muslim Empire, 45, 53
- Renaissance
- European, 438, 444, 445, 637, 684, 687
- republicanism, 684
- republics
- in East Africa, 349
 - in Europe, 153, 439, 441, 629, 637, 675
 - in Russia, 451
 - in India, 447, 486, 678
 - in Iran, 294
 - in northern Africa, 442
- rice
- cultivation of
 - in Ayuthia, 509
 - in Burma, 253
 - in Cambodia, 255
 - in China, 4, 20, 34, 147, 150, 156, 178, 179, 190, 192, 635
 - in Comoros, 126
 - in East Africa, 110, 112, 330
 - in India, 85, 150, 221, 222, 234, 240, 488, 684, 689
 - in Java, 100, 101, 169, 260, 264, 276, 501
 - in Madagascar, 138, 140, 372, 385, 386, 395, 397, 401, 407, 414, 419, 420, 426, 427, 428, 429, 556, 568, 581, 582, 583, 591, 647, 648, 650
 - in Muslim Empire, 47
 - monetary use of, 102, 200, 223, 245, 255, 256, 260, 265, 272, 401, 599, 600
 - in rituals
 - in Madagascar, 425, 427, 588
- symbolism of
- in Madagascar, 407, 427, 428, 649
- trade in, 88, 97, 140, 187, 245, 246, 250, 260, 261, 264, 267, 273, 276, 279, 308, 325, 363, 364, 448, 452, 463, 467, 485, 487, 488, 492, 494, 500, 503, 504, 507, 510, 520, 530, 533, 537, 552, 554, 555, 559, 574, 612, 668
- vocabulary for
- in Madagascar, 400, 426, 429
- Rig Veda*, 404
- Rihla (Journey)*, 168
- Rinierie Fini & Brothers (bank), 171
- ritsuryo* system, 215
- ritual slaughtering
- in Madagascar, 405
- rituals
- East African, 335, 340, 549, 587, 588, 596
 - on entering new houses, 424
 - Indian, 74, 231, 487
 - Malagasy
 - bath feast, 424–425
 - circumcision, 125, 399, 407, 417, 419, 425
 - enthronement, 421, 595, 596
 - funerary, 419, 564, 587, 588
 - for moon eclipses, 408
 - opening of fishing season, 550
 - rainmaking, 596
 - in rice cultivation, 427
 - sacrificial, 405–407, 416, 596
 - seven-year pilgrimage on tomb, 597–598
 - spirit expulsion, 585
 - in Southeast Asia, 101, 264, 276, 659
 - rivers, diversion of courses of
 - on Madagascar, 588
 - rock crystal, 112, 120, 123, 302, 339, 376, 564, 568, 593
 - rockets 163, 191, 241, 294, 467, 481
 - Roman law, revival of, 152

- rudders, 200
 axial
 Chinese, 148, 178, 186, 187, 195
 in India, 219
 in Europe, 200, 439, 634
 quarter, 98, 263
 transmission of techniques of, 151, 186, 200, 286, 439, 634
- Rus people, 8, 9, 14, 15
- Russian Orthodox Church, 451
- Sabaki language, 124, 126
 Proto-, 106, 397, 400, 597
- sacred enclaves, 42, 370, 597–598
- sacrifice
 in India, 74
 in Madagascar, 404, 405, 406, 407, 425, 427, 591, 595, 596
- Safavid dynasty, 295, 457, 516, 518
- Safaviya Sufi order, 518
- Sailendra dynasty, 16, 97, 98, 99, 100, 104, 420, 579, 589
- sailing seasons, 62, 196, 381, 383, 491, 569
- sails
 Arab, 164, 322
 Chinese, 37, 148, 186, 195, 206, 211, 438, 453
 European, 164, 438–439, 453
 Indian, 219
 lateen, 164, 439, 453, 499
 Southeast Asian, 98, 99, 263, 499
 western Indian Ocean, 292
- Saindhava dynasty, 79
- saints
 cults of
 in Muslim world, 231, 249, 462, 493, 597–598, 670
 shrines, 597
 Indian, 74
 leaving footprints, 394
- Sakalava dynasty, 585
- Sakalava people, 428, 585, 588
- salt
 extraction of
 in Africa, 54, 365, 441, 540
 in China, 34, 184
 monopolies on, 154
 in China, 32, 188, 208
 in Europe, 154, 437
- taxes on
 in China, 193, 207, 213, 459, 463, 676
 in India, 80, 221
 trade in, 35, 158, 159, 221, 267, 337, 459, 475, 510, 520, 540, 579, 668
- Sāmānid dynasty, 16, 46, 67, 216, 229, 231
- sāmanta*, 75, 77
- samurai, 199, 470
- sanctuaries
 in India, 85, 233
 in Iran, 249
 in Southeast Asia, 93, 94, 96, 97
- sandalwood, 27, 29, 88, 91, 211, 250
 trade in, 89, 90, 92, 103, 136, 182, 198, 225, 236, 243, 252, 257, 261, 262, 264, 266, 340, 342, 467, 470, 477, 555, 572
- “Sandalwood Flower” type coins, 98, 102, 259, 260, 262
- Sanjaya dynasty, 97, 98, 99, 100
- Sanskrit language, 25, 35, 66, 74, 94, 95, 101, 122, 219, 220, 221, 236, 259, 270, 322, 379, 384, 396, 397, 484
- influences
 in Java, 97, 102, 103, 258, 406, 411
 on Malagasy language, 400, 406, 410, 412, 422–425, 426, 566
- Santa Maria* (ship), 460
- Saraswat merchants, 486
- sawmills, 150, 168
- Sayyid dynasty, 244, 480
- scales, 504
 use of
 in East Africa, 546
 in Madagascar, 600
- scientific knowledge; *see also* knowledge
 Arab/Muslim, 46, 53, 65–67, 150, 168, 191, 285, 296
 in China, 148, 205
 in Europe, 439
 Chinese, 189, 191, 464, 687
 European, 151, 167, 191, 286, 637, 687, 688
 foreign influences on, 55, 151, 163, 294, 438
- Indian, 66, 150
 Korean, 463
- Scientific Revolution, 167, 455, 687
- scientific texts
 translation into Arabic of, 44
 transmission in Europe, 55, 151
- scripts, *see* writing
- sea level risings, 393
- seals
 use of, 461, 505, 626
- seasons
 names for
 in Madagascar, 422, 425
 navigational, 381, 383, 506
 in Madagascar, 425
- secularization, 167
 and capitalist development, 670
 in Europe, 455
- Sejarah Melayu*, 405, 505
- Seljukid dynasty, 65, 69, 70, 149, 231, 280–283, 285, 288, 306, 319
- semi-peripheries, 5, 6, 107, 157, 329, 356, 359, 627, 634, 636, 643, 650, 653, 654, 655, 657, 659, 660, 662, 663, 678, 679, 680
 agency of, 658, 660, 661
 development of, 661, 662, 663–664
 East Africa, 11, 105, 107, 157, 329, 356, 365, 661
 Southeast Asia, 87, 104, 661
- Sena dynasty, 216, 228
- serfs
 in China, 179, 180, 472
 in Dai Viet, 273
- serpents, *see* snakes
- servile labor; *see also* slavery; slaves
 in China, 179, 180, 472
 in Comoros, 368
 in Dai Viet, 273
 in India, 234, 238, 365, 448, 493
 in Muslim Empire, 12, 68
 in Roman Empire, 629
 used by Portuguese, 439
- sesame
 in Comoros, 126
 in East Africa, 123, 363
 in Southeast Asia, 261

- Shādhiliyya, 533
 Shāfi'i school of Islamic law, 231,
 237, 321, 352, 538,
 550, 572
Shāh Nāhmeh, 229
 Shāhī dynasties, 44, 216, 229, 230
 Shaivism, 74, 75, 80, 83, 91, 92, 93,
 94, 95, 96, 97, 99, 103,
 104, 233, 253, 255,
 258, 259
 Sharifi movement
 in Comoros, 370, 409
 in East Africa, 349, 352
 shells, use of, III, 117, 130, 139, 329,
 340, 341, 365, 394, 440,
 540, 564, 567, 601, 654;
 see also cowries
 Shiite Islam, 6, 43, 279
 caliphates of, 69
 in East Africa, 109, 345, 347,
 348, 350, 352
 in Egypt, 149
 emergence of, 6, 43
 in India, 248, 481
 in Iran, 295, 481, 516, 518
 protest movements of, 13, 17,
 36, 46, 67, 281
 spread of, 67, 69–70
 in western Asia, 280, 282
Shihlu, 469
Shiji, 288
 shipbuilding, 292, 668
 in China, 19, 20, 27, 39, 181,
 184, 185, 186, 187,
 206–207, 211, 467, 468,
 469, 628,
 644
 in East Africa, 551
 in Europe, 206, 453
 in India, 219, 235, 478, 488,
 491, 492
 in Iran/Persian Gulf, 284, 487
 in Muslim Empire, 49, 60,
 62, 220
 in Southeast Asia, 263, 276,
 504, 628
 ships, 620
 Chinese, 19, 26, 37, 39, 40, 148,
 178, 186, 187, 190, 195,
 202, 206–207, 209,
 210–211, 235, 236, 248,
 250, 265, 266, 434, 458,
 460, 463, 468–469, 471,
 536, 635
 East African, III, 122, 319, 342,
 343, 363, 546, 552
 European, 151, 164, 172, 200,
 286, 453, 460, 528, 634
 Greek, 43
 Portuguese, 439, 454,
 609, 610
 Venetian, 460
 Indian, 70, 80, 82, 218, 219, 220,
 245, 246, 247, 293, 295,
 305, 322, 323, 340, 354,
 363, 365, 447, 449, 478,
 479, 480, 485, 487, 490,
 491, 492, 494, 506, 524,
 532, 533, 537, 548
 Japanese, 200, 459, 460, 470
 Korean, 214
 Malagasy, 382, 569
 in Muslim Empire, 38, 60–62
 Persian/in Persian Gulf
 region, 24, 38, 200, 284,
 292, 305, 318,
 344–345, 349
 Portuguese descriptions of,
 508
 in Red Sea, 284, 308, 367, 379
 requisitioning of in China, 195
 Southeast Asian, 87, 89, 90, 91,
 95, 98, 99, 101, 186, 187,
 211, 215, 263, 273, 276,
 462, 471, 499, 503, 504,
 508, 510, 511, 524, 575
 Sri Lankan, 67, 241, 248
 vocabulary for, 211, 322
 Yemeni, 159, 304, 322
 shipwrecks
 archaeological data from, 27,
 187, 197, 204, 261, 263,
 500, 510, 512
 Shirazis
 in Comoros, 366, 369
 in East Africa, 344–345,
 346–350, 366, 538,
 539, 560
 shogunates, 176, 199, 200, 470
shoguns, 199, 214, 215, 470
 Shona language, 396, 586, 595
 Shona people, 198, 334, 541, 543,
 548, 587, 588, 596
 Shōsō-in treasure (Nara), 28,
 30
 shrines of saints, 597
 Siddi people, 479
 Sikhism, 477
 silk
 monetary use of, 20, 33, 202,
 204, 497, 654, 669
 production/industry
 in Byzantine Empire, 14, 48
 in China, 21, 23, 25, 40, 62,
 156, 181, 188, 203, 208,
 214, 452, 472, 475
 in India, 198, 218, 234, 246,
 448, 490, 492
 in Iran, 170, 289, 301, 450, 519
 in Italy, 163, 165, 436, 437
 in Madagascar, 579
 in Mongol Empire, 289
 in Muslim Empire, 31, 45, 48
 in Ottoman Empire, 517
 in Southeast Asia, 252, 264,
 268, 273, 494, 512
 in Yemen, 65
 transmission of techniques
 in, 641
 trade in, 30, 172, 265, 283, 291,
 300, 364, 653
 by China, 5, 19, 25, 27, 31, 32,
 62, 63, 64, 169, 170, 184,
 185, 186, 187, 192, 200,
 201, 204, 208, 235, 243,
 250, 267, 275, 279, 297,
 353, 434, 460, 471,
 474, 498
 by Dai Viet, 512
 by Egypt, 302, 443
 in India, 218, 233, 236, 243,
 250, 448, 480, 487, 492,
 494, 506, 537, 541, 579
 in Iran, 170, 450, 519, 520
 by Italy, 523
 by Java, 264
 Malagasy, 579
 by Muslim Empire, 15, 48
 Silk Roads
 cities along, 3, 10, 678
 closure of, 3, 73, 462
 control of
 by Tibetans, 33
 use of, 4, 5, 9, 23, 25, 40, 54, 58,
 70, 148, 170, 181, 182,
 190, 286, 297, 452, 471,
 516, 628, 666, 667
 declines, 174–175
 revivals, 19, 164, 206
 silver
 exchange rates for gold, 56,
 200, 237, 439, 474, 669

- export prohibitions on
 in China, 33, 204, 458
- mines/exploitation
 in Anatolia, 303
 in Burma, 237, 255
 in Central Asia, 46, 51, 67,
 68, 232, 303, 310, 523
 in China, 202, 237, 458,
 459, 474
 in Europe, 51, 68, 303, 443,
 450, 627
 in Muslim Empire, 51, 68
 in Southeast Asia, 92
- monetary use of, 44, 620
 in Central Asia, 156, 201,
 217, 230
 in China, 21, 156, 188, 201,
 202, 205, 213, 237, 434,
 435, 452, 459, 473, 474,
 475
 in East Africa, 110, 345, 348,
 363, 657
 in Egypt, 248, 303, 310, 312,
 522, 524, 530
 in India, 77, 79, 82, 84, 173,
 217, 222, 223, 228, 229,
 230, 231, 232, 237, 238,
 245, 250, 489, 492
 in Madagascar, 599
 in Muslim Empire, 15, 44,
 56
 in continental Southeast
 Asia, 92, 93, 94, 95, 255,
 260, 510
 in insular Southeast Asia,
 98, 101, 102, 264, 265,
 266, 279, 498, 513, 599
- objects/ornaments, 25, 27, 28,
 45, 48, 102, 142, 235, 300,
 302, 318, 461, 505, 564,
 566, 567, 599, 601, 610,
 611, 613
- shortages, 473, 685
 in Asia, 13, 77, 291, 435,
 473
 in China, 161, 435, 450,
 473
 in Egypt, 291, 312, 528
 in Europe, 451
 in Muslim world, 184
 in Southeast Asia, 473
- trade in, 201, 204, 235, 261, 279
 Central Asian, 164, 169, 185,
 188, 291, 310, 523
 Chinese, 27, 102, 164, 184,
 185, 186, 200, 467,
 492, 498
 Egyptian, 302, 312, 480,
 530, 533
 European, 165, 174, 312, 443,
 450, 451, 684
 Indian, 72, 249, 250, 350
 Japanese, 28, 207, 470, 473
 by Muslim Empire, 58, 62
 by Ottoman Empire, 520
 Southeast Asian, 102, 201,
 259, 260, 265, 273, 494,
 511, 513
 vocabulary for, 599
- Sindbad the Sailor Tales*, 3, 65
- Sinhalese people, 24, 101, 103, 225,
 240, 253, 254, 379, 469,
 484, 489, 519, 676
- slaughtering, ritual
 in Madagascar, 405
- slave trade, 652, 654, 655
 African, 47, 52, 54, 60, 158, 306,
 311, 330, 365, 439, 441,
 450, 455, 493, 508, 546,
 652, 653
 Arab/Muslim, 14, 15, 46, 47, 53,
 58, 64, 67, 111, 113, 165,
 284, 306, 311, 317, 320,
 323, 332, 573, 652
 Central Asian, 44, 46, 67,
 230
 Chinese, 25, 27, 33
 East African, 11, 14, 37, 38, 46,
 68, 111, 113, 115, 122, 128,
 130, 132, 133, 157, 197,
 208, 279, 284, 317, 320,
 323, 330, 331, 332, 333,
 349, 356, 359, 363, 364,
 365, 368, 392, 503, 546,
 613, 652, 660
 Egyptian, 165, 169, 172, 306,
 310, 311, 312, 450
 European, 8, 10, 15, 47, 58, 64,
 165, 169, 172, 310, 311,
 330, 439, 441, 455
 Indian, 122, 217, 229, 235, 242,
 244, 245, 246, 249, 332,
 356, 364, 365, 488,
 546
 Malagasy, 133, 134, 374, 413, 428,
 449, 503, 555, 558, 559,
 560, 561, 572, 573,
 579, 612
- Mesopotamian, 629
- Ottoman, 517
- Slavs, 25, 46
- Southeast Asians, 37, 38, 91,
 132, 279, 500, 501, 502,
 503, 508, 573
- Turks, 25, 46, 281, 299, 310, 439
- slavery, 651
 in Africa, 158, 330, 358, 454, 545,
 546, 652
 in China, 20, 27, 37, 91, 132, 186,
 191, 197, 279
 in Egypt, 47, 165, 169, 172, 299,
 306, 310, 311, 312, 314,
 315, 316, 450
 in Greek world, 625
 in India, 234, 241, 242, 244, 245,
 249, 275, 302, 332, 356,
 364, 365, 448, 479,
 488, 493
 in Madagascar, 416, 427, 563
 in Mesopotamia, 629
 in Muslim Empires, 46, 47, 48,
 54, 58, 59, 64, 67, 68, 69,
 70, 113, 133, 280, 281,
 284, 332
 in Roman Empire, 629, 658
 in Yemen, 317, 323, 332, 333,
 363, 546
- slaves; *see also* slavery
 black
 in China, 11, 37, 38, 91, 99,
 132, 197, 279, 333,
 365, 652
 in Egypt, 306, 311, 450
 in India, 235, 246, 306, 356,
 364, 365, 479, 493
 in Muslim Empires, 13, 47,
 59, 68, 69, 108, 113, 128,
 284, 333
 in Southeast Asia, 37, 38, 91,
 99, 279
 Central Asian, 25, 44,
 46, 67
 Circassian
 in Egypt, 172, 309, 312
 as soldiers, 46, 69, 230, 231, 232,
 241, 281, 299, 306, 309,
 493; *see also* Mamluks
 in Southeast Asia, 94
 Turkish
 in Egypt, 299, 310
 in Muslim Empire, 46, 281
 in Persian Gulf, 332

- smuggling
in China, 215, 462
- snakes
Malagasy myths on, 395, 589
symbolism of, 588
in Madagascar, 587, 597
- societies, *see* hierarchies
- Sogdian language, use of, 25
- Sogdian people, 3, 5, 23, 31, 35, 44, 45, 656, 678
trade by, 3, 5, 35, 678
- Solanki/Chālukya dynasty
(Gujarat), 79, 216, 217, 233, 235, 237, 238, 325
- solar activity, 148, 619, 646
cycles of, 619, 642, 643, 644
decreases in, 174, 300, 435, 646
increases in, 147, 433, 472
solar minima, 14, 147, 174, 300, 435, 644, 646
- Solomonic dynasty, 162, 316, 451
- Somavamshi dynasty, 221, 229, 233
- Song dynasty, 36, 40, 103, 147, 176, 178–203, 634, 635
- Songsshi*, 95, 183, 184, 187, 197, 257, 262, 265, 266, 347
- sorabe* manuscripts, 390, 592–593
- sorghum
in Madagascar, 396
- space structures
Malagasy, 416–417
- spatial symbolism, 416, 419
- spice trade, 8, 197, 654
Chinese, 27, 200, 243, 470
Egyptian, 316, 320, 325, 443, 523, 526–528, 530, 675
state control over, 524, 525, 528, 529
Indian, 217, 218, 225, 235, 245, 269, 291, 302, 309, 485, 487, 517, 520
Italian participation in, 443, 444, 523, 525, 528, 603
Portuguese control over, 454, 604
routes of, 89, 101, 102, 155, 169, 265, 273, 276, 294, 445, 450, 517, 520, 575, 602, 665
Southeast Asian, 89, 92, 101, 208, 246, 250, 261, 264, 273, 279, 500, 501, 503, 504, 506
- spinach, introduction of, 47
- spinning wheels, 194
in China, 148, 156, 181, 191, 194, 203
in Europe, 171
introduction of
in Europe, 163, 294, 634, 687
in India, 234
- spirits
Malagasy rituals for expulsion of, 585
- St. Petersburg manuscripts, 163
- stars, 361, 408, 576, 593
calendars set by use of, 423, 425, 594
navigation by, 164
of Chinese, 466, 467
of Indians, 479
of Muslims, 61, 379, 553, 570, 571, 572
- states; *see also* bureaucracies; city-states; government structures; private sector; public sector
building/emergence of, 170, 617, 618, 620, 621, 630, 635, 637, 638, 639, 640, 660, 661, 665, 673, 674, 675, 676, 678, 679, 683
in Central Asia, 10, 13, 160–161, 175, 288–289, 297, 627, 630, 643, 661, 666
in China, 4, 19–20, 21, 28, 31, 32, 147–148, 156, 161, 175, 178, 180, 182, 186–187, 189, 191, 202, 203–205, 212–214, 434–435, 452, 459–460, 474–475, 624, 626–627, 628, 629, 637, 685, 686
in East Africa, 157, 329, 331, 336–338, 340, 348, 349, 352, 358, 361, 365, 538, 539, 540, 542, 550, 653, 661
in Egypt, 149, 150, 168, 285, 299–301, 308, 309, 310, 316, 523–524, 528, 623, 624, 627
in Europe, 7, 15, 53, 150, 151, 153, 154, 155, 166, 170, 171, 436, 437, 439, 441, 442, 443, 444, 451, 455, 626, 627, 629, 640, 661, 679, 681, 682, 683, 684, 686, 687, 688
in India, 75–76, 78, 80, 83, 85, 86, 149, 168, 217, 220, 222–223, 226, 228, 234, 243, 245, 249, 447, 477, 478, 480, 481, 482, 483, 484, 628, 630, 633
in Iran, 290–292, 518, 626
in Japan, 28
in Mesopotamia, 618, 620, 622, 626, 627, 665
in Muslim Empire, 6, 12, 43, 44, 45, 48–50, 65, 68, 149, 281
in Ottoman Empire, 450, 516–517
in Southeast Asia, 89, 95, 97, 100, 101, 253, 255–256, 257, 260, 268, 270, 271, 275, 276–278, 448, 497–498, 500, 501, 503, 504–508, 509, 511, 659, 661
in West Africa, 15, 51–52, 157, 158, 440
in Yemen, 321–322, 327, 533
- bureaucracies of, *see* bureaucracies
- and capitalism, 677, 679, 681, 682, 683, 684, 685, 686, 687, 688
- competition between, 10, 16, 158, 227, 229, 254, 256, 263, 277, 341, 357, 483, 484, 539, 626–627, 630, 639, 640, 641, 668, 673, 674, 681–682
- control of
over economy, *see* economy
over trade, *see* economy
- European, 7, 679, 682
- finances of
in China, 19, 30, 32, 34, 35, 156, 161, 180, 182, 186, 187, 188, 193, 194, 201, 202, 204, 213, 435, 452, 458, 473, 474
in Egypt, 316, 523, 528, 529, 530
in Europe, 151, 153, 154, 173, 314, 437, 442, 682

- in India, 76, 77, 79, 80, 83, 86, 217, 220, 223, 243–244, 245, 483, 484
 in Iran, 290, 291, 292
 in Muslim Empire, 57, 58, 68, 69
 in Southeast Asia, 101, 103
 in Yemen, 321, 322, 531, 533
 and private sector, *see* private sector
 and religion, 659, 678
 in China, 4, 5, 18, 28, 29, 35, 189, 205, 460, 676, 678
 in Europe, 7, 10, 151, 152, 154, 167, 171
 in India, 74, 75, 85, 222, 233, 242, 484
 in Southeast Asia, 100, 253, 255, 257, 268, 276, 498, 505
 separation of, 152
 steam engines, 22, 687
 steel production, 49
 in Central Asia, 288
 in China, 22, 23, 471, 627
 in East Africa, 117
 in Europe, 150, 436
 in India, 218, 302, 354, 369
 in Muslim world, 48–49, 286
 in Sri Lanka, 87
 steppe routes, 10, 160, 164, 174, 286, 289, 293, 624, 667
 steppe societies/empires, 3, 23, 32, 148, 159–160, 162, 164, 185, 287–290, 460, 624, 625, 628, 640, 643, 661, 662, 663, 664, 666, 667
Sufāliya, 379, 546, 569, 570
 Sufism, 150, 168, 445, 670
 brotherhoods/orders of, 295, 481, 518, 533
 in India, 124, 231, 237, 243, 246, 295, 477, 478, 481, 493
 in Iran, 124, 231, 246, 249, 294, 295, 481, 493, 516
 in Mesopotamia, 516, 518
 in Mongol Empire, 231
 in Ottoman Empire, 516
 in Southeast Asia, 268, 498
 in Yemen, 533
 spread of, 268, 295, 481, 493, 498, 670
suftaja credit notes, 56, 57, 58, 108, 201, 242, 283
 sugar, 25, 34, 48, 49, 64, 73, 185, 187, 192, 207, 217, 221, 242, 245, 267, 300, 305, 448, 450, 474, 485, 487, 488, 492, 520, 523, 525, 533, 554, 601
 sugarcane
 in China, 34, 179
 in East Africa, 110, 131, 535
 in Egypt, 525
 in Europe, 49
 in India, 245
 in Madagascar, 429
 in Muslim Empire, 47, 48, 49
 Sui dynasty, 3, 16, 18–19, 22, 29
Suishu, 23, 35, 198
Sukraniti, 181
 sultanates, 309
 in Comoros, 370, 409, 559
 in East Africa, 111, 359–364, 449, 535, 539, 546, 547, 551, 552, 553, 603
 in Egypt, 307–316, 522–531
 Indian, 168–170, 173, 221, 229–232, 241–251, 365, 477–495, 606
 in Madagascar, 562
 merchant, 169, 170, 278, 447, 448, 496–508, 606
 Ottoman, 282, 297, 449–450, 516–518, 529, 531, 534, 604, 608
 Southeast Asian, 170, 267, 268, 275, 278, 408, 448, 496–514, 606, 609
 western Asia, 149, 280–287, 295
 in Yemen, 313, 314, 317–328, 531–534
Sunghuiyaokao, 257
 Sunni Islam, 6, 13, 43, 44, 59, 67, 149, 150, 279, 280, 285, 299, 308, 479, 481, 516
 in East Africa, 109, 347, 350, 352, 359, 538, 550
 in Yemen, 321, 322, 352
 in West Africa, 306
 Sūryavamsha dynasty, 478, 486
 “Swahili corridor,” 124, 138, 370
 Swahili language, 106, 107, 112, 124, 377, 394, 395, 396, 397, 400, 401, 413, 414, 557, 573, 586, 593, 600, 601
 dialects, 110
 influences on
 Comorian, 124
 Malagasy, 394, 396, 397, 399, 400, 413, 557, 581
 Proto-, 120
 spread of, 107
 use in Madagascar of, 573
 Swahili people/culture, 132–133, 162, 320, 328, 329–366, 535–552
 Islam of, 108, 157, 169, 170, 345, 347, 350, 352, 538, 548, 550, 551
 merchants, 339, 341, 449, 537, 541, 542, 551, 608
 origins of, 11, 14, 106–123
 settlements/influence
 on Comoros, 124, 125, 138, 366
 on Madagascar, 138, 170, 366, 371, 390, 573, 600
 travels by, 331, 449, 551, 552, 560
 swahilization
 in Madagascar, 556, 557–558, 649
 Swedes
 trade by, 14, 15
 sweet potatoes
 in Madagascar, 396
syabbandar, 278, 448, 506–508
 symbolism
 of bananas
 in Madagascar, 399
 color-based
 in Africa, 596
 in Madagascar, 416
 in circumcision rituals
 in Madagascar, 407, 419, 425
 of precious metals
 in Madagascar, 567
 of snakes, 588
 in Madagascar, 587, 591, 597
 Southeast Asian
 influences in Madagascar, 406–409, 414–425, 576, 577, 591

- symbolism (*cont.*)
 spatial
 in Madagascar, 416–421, 579
 symbols of power
 in Madagascar, 406, 591
- Tāhirid dynasty, 457, 529, 533–534
Taiping guangji, 197
Taittiriya Upanishad, 599
 Talmud, 55
 Tamil language, 135, 199, 246, 268,
 397, 400, 426, 462,
 507, 597
 Tamils, 135, 186, 225, 226, 487, 670
 in China, 199, 210, 224, 250
 in Southeast Asia, 224, 228, 257,
 258, 259, 268, 448,
 505, 507
 trade by, 226, 236, 247, 447, 448,
 476, 488, 505
 Tañala people, 405, 407, 415, 419,
 421, 424, 425, 427,
 588, 589
 Tang dynasty, 4, 13, 16, 19–37
Tangshu, 18, 24, 319, 385
 Tangut, 18, 23, 148, 185, 186, 288
Tantara ny Andriana, 586
 Tantric Buddhism, *see* Vajrayāna
 Buddhism
 taro
 in Madagascar, 399, 597
 tax collection tax farming
 in China, 204, 205, 213, 676
 in East Africa, 332
 in Egypt, 64, 301, 305
 in India, 83, 86, 218, 220, 223,
 226, 234, 484, 486
 by merchants, 32, 64, 182, 218,
 225, 234, 261, 276, 292,
 293, 301, 319, 676
 in Mongol Empire, 205,
 231
 in Muslim Empire, 57, 58, 64,
 65, 676
 private, financial risks of,
 292
 in Persia, 292, 293
 in Southeast Asia, 101, 103, 257,
 258, 261, 276, 676
 taxation, 622, 623, 640, 641, 651,
 659, 660, 675; *see also*
 customs duties
 in Central Asia, 229, 298, 643
 in China, 32, 213, 437, 463
 Ming period, 213, 214, 435,
 459, 460, 463, 471,
 473, 475
 Song period, 148, 156, 161,
 179, 180, 182, 184, 187,
 188, 190, 192, 193,
 201, 202
 Tang period, 19, 20, 26, 28,
 31, 32, 34
 Yuan period, 203, 207
 in East Africa, 330, 542, 544
 Kilwa, 360, 547
 Mombasa, 548
 in Egypt, 51, 67, 308, 309, 311,
 312, 315, 321, 522, 524,
 525, 526, 527, 529, 530
 in Europe, 151, 152, 153, 154, 172,
 437, 443, 681, 686
 in Hormuz, 519
 in India, 80, 83, 85, 86, 218, 220,
 222, 223, 232, 233, 236,
 238, 242, 244, 606
 Chola state, 222, 223, 226,
 239
 Delhi sultanate, 231, 242,
 244
 Lodi state, 480
 Vijayanāgara, 484, 485, 486,
 487, 488, 490
 in Japan, 28, 199, 207, 470
 in Malacca, 505–506
 in Mongol Empire, 160,
 164, 169
 in Muslim Empire, 9, 12, 44,
 45, 46, 48, 49, 50, 57, 59,
 68, 69, 281, 282
 in Ottoman Empire, 450, 517
 in Persia, 290, 291, 294, 296
 in Southeast Asia, 40, 92, 101,
 103, 260, 264, 271, 272,
 273, 274, 276, 278, 279,
 500, 501, 509, 510,
 512, 513
 in Yemen, 318, 321–322, 323,
 324, 326, 327, 448, 532,
 533, 546, 675
 tea, 32, 188, 193, 474–475
 cultivation of
 in China, 32, 34, 178, 185,
 192, 667
 trade in
 by China/in China, 5, 25, 34,
 35, 185, 186, 249,
 460, 475
 technical innovations, 109, 166,
 330, 620, 634–639, 643,
 651, 655, 665, 667
 in China, 4, 5, 7, 12, 21, 22, 34,
 36, 148, 166, 178, 180,
 182, 186, 188, 189, 203,
 626, 628, 629, 633, 634,
 635, 674
 European adaptations of, 7,
 8, 150, 151, 156, 162–163,
 200, 438, 634, 641
 in Egypt, 623
 environmentally induced, 635,
 638, 640, 642
 European, 163, 164, 171, 435, 438,
 443, 453, 516, 635, 640,
 661, 669, 674, 683,
 686–688
 in India
 introduction of, 84, 219, 234
 in Iran, 164, 626
 in Mesopotamia, 618, 620,
 626
 Mongol, 203
 in Muslim world, 6, 46, 47, 49,
 163, 164, 168, 286, 309,
 446, 516
 in peripheries, 663
 in semi-peripheries, 661, 663
 in Southeast Asia, 102, 663
 and state policies, 674
 in steppes region, 624, 663
 and weapons industry, 516
 in western Asia, 625, 626
 technology transfers, 636, 641,
 687
 from China
 to Europe, 7, 151, 163, 167, 173,
 181, 200, 203, 287, 294,
 641, 687
 to India, 76, 236
 to Muslim world, 45, 151, 168,
 173, 181, 286, 291,
 294, 309
 to China, 5, 29
 from cores, 10, 151, 163, 167, 168,
 181, 200, 234, 236, 241,
 294, 329, 641, 662
 from Muslim world, 49, 150,
 151, 152, 164, 165,
 200, 234
 in steel production, 48, 286
 in textile production, 48, 163,
 234, 436

- in water management, 291
 - in weapons industry, 10, 163, 181, 203, 241, 510, 641
 - Telugu people, 446, 484
 - temperatures, *see also* cooling; warming
 - averages, 647
 - decreases, 4, 157, 160, 646
 - in Europe, 646
 - increases, 16, 147
 - minima, 646
 - temples
 - in China, 210, 250, 262
 - economic role of, 75, 85, 222, 223, 226, 233, 236, 253, 255, 264, 269, 276, 620, 621, 622, 626
 - Indian, 76, 80, 84, 85, 98, 226, 233, 234, 238, 484, 487, 488
 - destruction of, 76, 229, 230, 478
 - land ownership by, 222, 233, 234, 484
 - role of, 73, 74, 75, 76, 85, 222, 223, 226, 233, 236, 484
 - Japanese, 28, 199
 - political role of, 75, 85, 100, 222, 233, 253, 255, 257, 276, 484
 - Southeast Asian, 91, 93, 262, 276, 417, 418
 - Burmese, 240, 253, 254
 - Javanese, 97, 98, 100, 102, 264, 271, 276
 - Khmer, 95, 255, 269
 - land ownership by, 253, 255, 264, 269, 276
 - Vietnamese, 257
 - tenrec, 367
 - terrestrial trade, *see also* caravan trade; Silk Roads
 - trans-Saharan, 158, 173, 439, 440, 662
 - textiles; *see also* cotton; silk
 - banana fiber used for, 398
 - and cores, 330, 653, 654
 - gifts of
 - in East Africa, 344, 357, 364, 546, 550
 - in Southeast Asia, 268
 - imports
 - in China, 90, 235, 264
 - in East Africa, 118, 330, 331, 340, 364, 447, 537, 540, 541, 542, 548, 549, 590, 604, 608
 - in Egypt, 302, 443, 523
 - in Europe, 169, 170, 443
 - in India, 242, 302, 323
 - in Iran, 291, 295, 519, 520
 - in Madagascar, 612, 649
 - in Muslim Empire, 58
 - in Ottoman Empire, 450, 517
 - in Southeast Asia, 102, 264, 268, 279, 488, 498, 500, 506, 507, 513
 - in West Africa, 52, 158, 170, 441
 - in Yemen, 302, 318, 374, 533
 - prices of, 541, 623
 - production of
 - in African interior, 336, 338
 - in China, 4, 21, 22, 23, 148, 156, 161, 181, 188, 190, 191, 192, 203, 434, 452, 458, 472, 475, 684
 - in East Africa, 329, 354, 364, 541, 548, 608, 656
 - in Egypt, 300, 523, 530
 - in Europe, 163, 165, 167, 171, 287, 436, 438, 445, 657, 687
 - and financial sector
 - development, 437
 - in India, 223, 226, 234, 235, 246, 447, 477, 479, 480, 483, 487, 488, 492
 - in Iran, 170, 282, 519
 - machinery used for, 156, 163, 168, 171, 190–191, 203, 234, 287, 439, 487, 687
 - in Madagascar, 374, 391, 398, 559, 567, 615
 - in Mesopotamia, 618, 620, 622, 651
 - in Muslim Empire, 6, 48, 64
 - in Ottoman Empire, 517
 - in Southeast Asia, 91, 101, 102, 264, 276, 448, 500, 510
 - in West Africa, 158
 - in Yemen, 309, 318, 322
 - trade in/exports of
 - Chinese, 34, 170, 208, 278, 498
 - East African, 363, 364, 548, 549
 - Egyptian, 300, 318, 340, 364, 590
 - European, 162, 165, 170, 172, 302, 441, 443, 450, 517, 523
 - Indian, 58, 102, 217, 221, 224, 233, 235, 243, 245, 278, 291, 302, 318, 323, 364, 447, 477, 479, 487, 488, 492, 494, 500, 506, 507, 513, 515, 519, 520, 533, 537, 541, 548, 604, 605, 608, 612
 - Iranian, 170, 282
 - Islamic (Muslim Empire), 48, 90
 - Malagasy, 174, 559, 615
 - Mesopotamian, 618, 622, 623, 651
 - profits on, 314, 541
 - Southeast Asian, 101, 264, 278, 279, 510, 519
 - Yemeni, 318
- Theravāda Buddhism
 - in Southeast Asia, 253, 254, 255, 258, 270, 510
- thomism, 167
- Thousand and One Nights*, 3, 65
- time
 - perceptions of
 - European, 444
 - Malagasy, 422–425
 - value of
 - in China, 182
 - in Europe, 165
 - in Muslim world, 182
- Timurid dynasty, 244, 295, 452, 457, 471, 485, 515–516
- titles
 - Arabo-Persian, 280, 351
 - Central Asian/Iranian, 297
 - Comorian, 124, 409
 - East African, 112, 347, 351, 550, 585, 595
 - in Egypt, 301, 328, 673
 - European, 150
 - Indian, 81, 233, 236, 482, 489
 - in Iran, 290, 347
 - Malagasy, 132, 405, 406, 410, 414, 421, 591

- titles (*cont.*)
- Southeast Asian, 97, 260, 267, 380, 406, 420, 579, 589
 - Syriac, 83
 - Turkish, 149
 - Yemeni, 236
- Tocharian languages, 25
- Tomara dynasty, 76, 217, 229
- tombs
- Chinese, 27, 36, 197, 567
 - Muslim, 199, 209
 - Comorian, 366, 368, 553
 - East African, 109, 334, 335, 336, 340, 341, 344, 354, 357, 361, 365, 536, 540, 543, 559, 587, 652, 653
 - in Europe, 8, 15
 - Malagasy, 125, 377, 424, 557, 558–559, 564–565, 566, 567–568, 579, 580, 581, 582, 587, 588, 595, 596, 598, 649
 - in northern Africa, 669
 - of saints in Muslim world, 43, 597–598, 670
 - in Southeast Asia, 267, 268, 269, 498
 - West African, 54
- Tongdian*, 94, 118
- Topkapi palace, 518
- tortoises, *see* turtles
- trade; *see also* exchange networks; exchanges; unequal exchanges
- balance of, 657
 - China–Southeast Asia/India, 201, 272, 475, 494, 512
 - Egypt–Europe, 165, 529
 - Egypt–India, 328, 451, 494, 528, 529, 530
 - Europe–Asia, 440
 - India–West, 250, 494
 - India–Southeast Asia, 250, 494
 - negative, 202, 237, 316, 494, 522, 529
 - positive, 475, 494, 657
 - western Asia–southern Asia, 295
 - core–periphery, 330, 331, 332, 636, 651–659, 661
 - long-distance, 634, 635, 651, 683
 - and capitalist practices, 155, 165, 171, 190, 435, 437, 453, 460, 487, 679, 681–682, 683
 - and development of
 - markets, 5, 19, 148, 182, 634, 638, 651, 682, 683
 - in first world-systems, 618, 620, 622
 - in the formation of the Afro-Eurasian world-system, 617, 630
 - and religion, 27, 50, 54, 59–60, 62, 65, 73, 157, 168, 199, 246, 247, 310, 344, 351, 352, 366, 449, 498, 507, 514, 536, 628, 638, 669, 678
 - risk coverage companies
 - for, 437
 - social stratification caused by, 542, 653
 - and statebuilding, 182, 190, 195, 224, 233, 278, 300, 327, 337, 338, 447, 494, 501, 523–526, 528, 673, 675, 681–682, 683, 686
 - wealth accumulation
 - through, 63, 185, 199, 240, 247, 248, 280, 292, 314, 315, 316, 326–327, 336, 347, 479, 480, 487, 507, 676; *see also* merchants
 - in modern world-system, 609
 - state control over, 673, 674
 - in China, 5, 26, 32, 182, 188, 201, 204, 278, 452, 459, 674
 - in Egypt, 300, 301, 322, 447, 524, 525, 528, 675
 - in India, 242, 482
 - by Portugal, 604
 - in Southeast Asia, 262, 265, 278, 503
 - in Yemen, 308, 322, 327
- trade treaties
- of Byzantine Empire and Venice, 155
 - in East Africa, 113
 - of Egypt, 53, 300, 301, 310
 - of Venice and the Ottoman Empire, 443
- trading companies
- armed troops of, 225
- Tran dynasty, 271, 272
- transaction costs, 57, 526, 654, 674
- translations, 29, 459
- of Arab works, 15, 55, 151, 154, 166, 493
 - of Greek works, 6, 44, 65, 151, 445, 687
 - of Indian works, 6, 29, 35, 44, 55, 66, 102
 - of Marco Polo's account, 207
 - of Persian works, 44
- transportation, 26, 635, 668
- in China, 4, 18, 21, 22, 26, 34, 147, 148, 468, 637, 674
 - in India, 276
 - costs of, 443, 541, 641, 654, 678
 - in Southeast Asia, 508
- treasure of Broach, 328
- treasure of Mtambwe Mkuu, 345
- treasure of Wonoboyo, 102
- Treatise on Agriculture*, 687
- Treaty of Lodi, 442
- Treaty of Tordesillas, 453
- trebuchets, 203, 241, 289, 312
- tributes
- payments of, 506
 - by Chinese, 148, 160, 176, 185, 190
 - by Hormuz, 519
 - in India, 76, 78, 80, 83, 220, 231, 242, 245, 483, 489
 - by Malacca, 505
 - by North African powers, 313
 - by Portuguese, 546
 - by Swahili cities, 364, 546
 - to China, 24, 25, 94, 169, 184, 185, 197, 214, 227, 254, 265, 273, 274, 275, 459, 460, 461, 462, 463, 467, 469, 497, 501, 511, 552
 - to Egypt, 120, 312, 315
 - to Genoa, 313
 - to Malacca, 505, 506
 - to Ottoman Empire, 449, 516
- Tsingoni Chronicle, 370
- Tughlūq dynasty, 173, 176, 210, 231, 235, 243, 365
- Ṭulūnids, 13, 14, 46, 67

- Turin map, 561
- Turkmen, 281, 321, 450, 457, 481, 515, 518, 519, 522, 523, 531, 664
- Turks, 3, 8, 9, 15, 19, 23, 30, 31, 44, 45, 46, 67, 81, 83, 149, 175, 176, 177, 209, 216, 229, 230, 231, 244, 280, 281, 282, 293, 321, 481, 492, 494, 516–518, 531, 604, 658, 664
- deportation to China of, 23
- mercenaries, 46, 520
- slaves, 25, 46, 232, 241, 243, 299, 310, 356, 481, 520
- turtles, 134, 138, 141, 373, 374, 376, 389
- as food in Comoros, 125, 126
- turtle shells, 27, 91, 111, 132, 188, 196, 197, 208, 252, 265, 266, 339, 342, 373, 374
- Uighurs, 23, 25, 30, 31, 32, 33, 35, 161, 163, 164, 185, 188, 205, 289, 290, 516
- horse trade by, 31, 32
- Umayyad dynasty, 6, 7, 11, 17, 25, 43–44, 45, 51, 52, 53, 60, 66, 69
- Umda*, 553, 569, 570
- unequal exchanges, 330, 331, 332, 636, 651–659, 661
- criticism on concept of, 658
- universities
- in China, 166
- in Europe, 15, 151, 152, 166–167, 286, 444, 445, 637, 639, 684
- in Muslim Empire, 66, 285
- Upanishads*, 627
- Urban Revolution, 618
- urbanization, 10, 617, 668, 671, 680
- in China, 10, 21, 148, 180, 624, 626
- in East Africa, 110, 341, 370
- and economic growth, 645
- in Europe, 150, 436
- global, 156, 671
- in India, 222, 235, 478
- in Muslim world, 6, 10, 12, 44, 69
- in Southeast Asia, 497, 500, 503
- Java, 264, 500, 503
- al-Urjūz*, 569
- usury, 437, 670
- prohibition
- for Brahmins, 222
- in Islamic law, 56, 513
- utility notion, 652
- Uzbeks, 516
- Vaghela dynasty, 238
- vahitra* ships, 219
- Vajrayāna Buddhism
- in China, 89
- in India, 74
- in Southeast Asia, 91, 96, 271
- spread of, 84
- value, 25, 54, 55, 265, 267, 311, 322, 330, 331, 543, 651–657, 669
- of gold, 174, 200, 237, 335, 439, 453, 474, 542, 669
- of silver, 174, 200, 204, 237, 439, 474, 669
- standards of; *see also* coinage; cowries; currency; gold; silver
- in China, 156, 201, 202, 213, 459
- in East Africa, 331, 543
- gold as, 267, 599
- in India, 223, 228, 237
- silver as, 156, 201, 213, 255, 459, 599
- in Southeast Asia, 101, 255, 267, 270, 279, 599
- system
- in Madagascar, 599–600
- Vazimba people, 125, 395, 409, 585–586, 587–588
- Venetians, 154, 155, 165, 169, 171, 172, 285, 286, 291, 311, 314, 435, 438, 439, 440, 441, 443, 449, 450, 455, 460, 516, 518, 519, 523, 524, 525, 526, 528, 529, 603, 604, 607
- Vezo people, 423
- Vikings, 10, 14, 15, 150
- raids by, 15
- violence, 652; *see also* deportations; slavery
- of cores and semi-peripheries, 5, 6, 23, 160–161, 203, 288, 290, 297, 461, 660
- of European imperialism, 154, 155, 444, 455, 605, 607, 679, 682, 688
- in Japan, 200
- of peripheral populations, 658
- religious, 150, 151, 154
- state violence, 498, 605
- xenophobic
- in China, 36, 212
- Virashaiva sect, 237
- Vishnuism, 74, 78, 83, 85, 86, 88, 93, 94, 100, 199, 210, 233, 253, 255, 276, 462
- viziers, 45, 58, 66, 149, 281, 285, 290, 300, 301, 306, 365, 520, 676
- Voajiry people, 409
- volcanic eruptions, 12, 14, 101, 435, 646
- Voyage autour de la terre*, 172
- Wadebuli people, 122, 130, 142
- Wadiba people, 122
- waflimi* title, 112
- wages/wage labor, 545, 622, 623, 652, 661, 681, 689
- in China, 148, 181, 191, 215, 452, 474, 475, 674, 684
- in Egypt, 522
- in Europe, 436, 438, 625, 681
- in India, 231, 242
- in Muslim Empire, 46
- wakil al-tujjār* title/function, 301, 304
- Waldseemüller globe/map, 446, 610
- walls
- Chinese Great Wall, 459
- waqf* donations, 282, 310, 530
- waqwaq* tree, 134
- warming
- global, 12, 42, 147, 157, 169, 433, 690
- in China, 3, 20, 626
- in Eurasian steppes, 3, 148
- in northern Europe, 14, 15
- warrior aristocrats/aristocracies; *see also* *iqṭāʿ*
- Central Asian, 160, 288–289, 517
- Chinese, 36, 468
- in Egypt, 299, 309, 310, 316
- European, 7, 10, 154, 170

- warrior aristocrats (*cont.*)
 Indian, 77, 220, 226, 229, 230, 231, 365, 484, 485
 in Iran, 294
 Japanese, 198, 199, 215, 470
 in Muslim Empires, 46, 69–70, 281, 516–517
 in Southeast Asia, 509
 water; *see also* canals
 and kingship, 221, 278, 405, 407, 419, 579, 588
 lifting techniques
 in China, 20, 179
 in India, 79
 in Muslim world, 20, 48, 286, 287
 management of
 in China, 190, 212, 674
 in India, 73, 84, 86
 in Madagascar, 427, 568, 581
 in Southeast Asia, 100, 255, 500–501
 sources of
 in Madagascar, 581
 symbolism of
 in Madagascar, 405, 407, 416, 419, 567, 587, 588
 water mills, 150, 164, 181, 287, 628
 watermelons
 in Madagascar, 396
 waterwheels, 22, 48, 164, 182, 183, 203, 287
waungwana system, 349, 350, 351, 358, 539
 wealth; *see also* merchants
 accumulation of, 618
 in China, 12, 35, 36, 193, 194, 195, 207, 209, 213, 467, 475
 in East Africa, 330, 336, 349, 351, 357, 359, 536, 547, 549
 in Europe, 170, 172, 436, 437, 455, 602, 675
 in India, 216, 234, 238, 241, 447, 482, 483, 487, 488, 489, 493, 608
 in Iran, 292, 293
 in Japan, 28
 in Muslim Empire, 51
 in Southeast Asia, 103, 253, 261, 264, 272, 277, 503, 506–508, 512, 678
 in Yemen, 318, 325
 destruction of, 10, 360
 extraction of
 by dominant regions, 158, 636, 650, 651, 653, 659, 660
 redistribution of, 220, 253, 351, 639, 650, 653, 674
 transfers of, 5, 109, 230, 330, 636, 650, 651, 656, 659, 660, 662
 weapons, 517, 625; *see also* cannons; guns
 invention of
 in China, 4, 148, 173, 181, 191, 203, 641
 production/industry, 455
 in China, 5, 23, 148, 156, 173, 181, 191, 203, 214, 455, 467
 in Egypt/Muslim world, 163
 in Europe, 163, 173, 181, 203, 455
 in India, 455, 492, 537, 603
 in Ottoman Empire, 449–450, 455, 516
 in Southeast Asia, 492, 510
 technology transfers in, 163, 181, 203, 241, 294, 329, 490, 510, 641, 662
 trade in, 364, 440, 470, 480, 485, 492, 507, 537, 579
 weavers/weaving, 654; *see also* cotton production; looms; silk
 in Central Asia, 46
 Chinese, 31, 45, 46
 in China, 23, 156, 191, 192, 203, 289, 475
 in East Africa, 335, 338, 354, 540, 551
 in Egypt, 523
 European, 171, 287, 436, 683
 Indian, 223, 225, 226, 234, 477, 485, 487, 488
 in Madagascar, 373, 388, 399, 559, 567
 in Muslim Empire, 31, 45, 48
 in Southeast Asia, 102, 278
 in West Africa, 52, 158
 weights, 620, 621; *see also* coinage
 in China, 21
 in East Africa, 355, 363, 401
 in Egypt, 524
 in Iran, 294
 Malagasy, 396, 400–401, 599–601
 in Southeast Asia, 92, 104, 255, 265, 396, 510
 in Java, 101, 102, 260, 501
 in Sri Lanka, 600
Weishu, 198
 white–black distinction
 in East Africa, 358
 in Madagascar, 409
 winding machines, 151, 163, 190, 200, 287
 windmills
 invention of, 5, 29, 48, 439
 spread of, 5, 29, 48, 164, 439
 winds
 importance/use of, 62, 218, 325, 383, 569, 666
 Malagasy vocabulary for, 411–412
 women; *see also* power
 participation in esoteric cults
 by, 74
 rights/status of
 in China, 191, 192
 in India, 237
 rulers
 in Madagascar, 578
 in Southeast Asia, 278
 trade activities by, 192
 in Southeast Asia, 508
 transmission of power
 through, 415, 563
 wood, 4; *see also* aloeswood; laka-wood; sandalwood; teak
 aromatic, 27, 198
 shortages of
 in China, 206
 in Muslim world, 173
 trade in
 East African, 68, III, II4, 136, 197
 Indian, 68, 80, 217, 218, 220, 233, 243
 Japanese, 185, 195, 206
 Southeast Asian, 90, 91, 92, 101, 182, 195, 198, 215, 236, 250
 West African, 158

- world-systems, 618, 655; *see also*
 cores; cycles; periph-
 eries; semi-peripheries
 Afro-Eurasian, 159, 172,
 617
 “capitalism”/capitalist
 practices in, 48, 152, 153,
 155, 156, 166, 167, 171,
 172, 178, 187, 190, 191,
 226, 300, 434, 435, 437,
 439, 441–442, 446, 673
 coevolution in, 109, 329, 332,
 634, 650, 659, 661–665
 cycles in, 11, 147, 169, 173, 175,
 617, 630–645
 cyclical logic in, 619,
 642
 formation of, 617, 624,
 629–630, 657
 hierarchies in, 331, 617, 635,
 650–653, 657, 658, 659,
 660, 662, 663, 665, 668,
 671, 676, 680, 689
 integration in/into, 40, 617,
 619, 620, 626, 630, 633,
 637, 639, 644, 665, 673,
 678, 680
 of East Africa, 11, 107, 157,
 552, 629
 of East Asian regions,
 40, 630
 of Europe, 153, 171, 681,
 683
 of West Africa,
 157–158, 629
 recession periods in, 3, 13, 16,
 36, 91, 138, 173–175, 215,
 245, 251, 327, 433, 617,
 639–645, 658, 660,
 664, 690
 restructuring, 159, 168, 452,
 610, 643, 644
 synchrony/asynchrony in,
 138, 175, 215, 251, 644
 American, 620
 capitalist world-system,
 609–610, 651, 673, 675,
 680–690
 criticism of theory of, 655,
 658
 East Asian, 628–629
 first, 618–624
 Indian, 626, 628
 religion in, 158, 637, 659,
 678
 western world-system, 625,
 627, 628
 writing, 6, 623, 624
 alphabetic, 625
 Arabic, 108, 137, 210, 236, 261,
 267, 346, 498, 510,
 576, 600
 Arabico-Malagasy, 108, 404,
 410, 567, 576–577, 650
 Bugis, 500
 Cham, 380
 Chinese, 267
 in East Africa, 108, 346
 Jawi, 576, 577
 Kawi, 102
 Nāgarī, 98, 102
 Pallava, 86, 88, 102, 265
 Pegon, 576
 Tamil, 210, 258
 Uighur, 31, 161, 163, 289
 Wubei zhi, 465, 466, 467
 Wujing zongyao, 181
 xenophobic violence
 in China, 36, 212
 Xingcha shenglan, 467
 Xintangshu, 33, 38, 92, 99, 196
 Xiongnu people, 160, 288, 628,
 642, 643, 658
 Xu wenxian tongkao, 214
 xylography
 in China, 22, 148, 188, 189,
 635, 637
 in Europe, 163
 invention of, 5, 635
 transmission of, 5, 29, 76
 Yādava dynasty, 221, 229,
 238
yahang merchants, 185
 Yaphuwa treasure, 239
 Yi (Choson) dynasty, 463
Yingyai Shenglan, 458, 461
Yingzao fashi, 189
Yiqie jing yinyi, 37
 Yuan dynasty, 176, 203–212,
 271, 276
Yuanshi, 503
Yuktikalpataru, 219
 Yutu, 196
 Yuyang zazu, 118
 Zafimaniry people, 406
 Zafimbazaha clan, 411
 Zafintsimeto people, 590
 Zafirambo clan, 406
 Zafiraminia manuscripts, 590, 591
 Zafiraminia people, 177, 372, 379,
 394, 402, 403–415, 419,
 422, 457, 568, 577, 582,
 591, 610, 648
 origins of, 590
 zakāt taxes, 308
 Zavaka people, 177, 402,
 410–412, 648
 Zaydis, 69
 in East Africa, 119, 348
 in Yemen, 119, 321, 352
 zebus
 in Africa, 123, 131, 140, 391
 in Comoros, 126
 in Madagascar, 140, 373, 394,
 395, 406, 407, 591
 consumption of, 406
 introduction of, 138, 406,
 427, 647
 sacrifice of, 405, 406, 425,
 427, 591
 use of, 427–428
 trade in, 123, 649
 zero, signs for, 54, 73,
 191
Zhaoye Zazi, 201
Zhenla fengtuji, 208
 Zhizo people, 115, 116, 334
 Zhou (Ancient), 625
 Zhou (Later), 40
 Zhou (Northern), 18, 20
Zhufanzhi, 105, 133, 196,
 208, 257, 264, 265,
 266–267, 273
 Zimba people, 586
 Ziyadid dynasty, 318
 Zodiac, 579, 593
 zoological gardens, 461
 Zoroastrianism
 in Central Asia, 35
 in China, 5, 30, 36, 63
 in India, 50, 63, 82, 83, 480
 in Southeast Asia, 92
 Zott people, 68

